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Rising Health Care Costs: Causes, Implications, and Strategies

RISING HEALTH CARE COSTS:
CAUSES, IMPLICATIONS, AND STRATEGIES

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PREFACE

This study is the second part of the Congressional Budget Office's (CBO's) response to a request from the Senate Committee on Finance for a study of trends in spending on health and the effectiveness of strategies for controlling these costs. The study describes the characteristics of the health care sector--including the market for health insurance and the market for health services--that affect the level and rate of increase of health spending. It also examines various cost containment strategies and the extent to which they have been effective. The earlier paper, "Trends in Health Expenditures by Medicare and the Nation" (January 1991), provided information on national spending for health since 1965 and compared Medicare's spending with the overall pattern. In keeping with CBO's mandate to provide objective and impartial analysis, neither that paper nor this study contains recommendations.

The study was prepared by Kathryn Langwell and Terri Menke, of CBO's Human Resources and Community Development Division, under the direction of Nancy M. Gordon. Terri Menke also provided Appendix A on the composition of national health expenditures and Appendix C on the health care systems of several other countries. Sandra Christensen was responsible for Appendix B, which examines the reasons some people are uninsured, based largely on an analysis conducted by Jack Rodgers using data from the Current Population Survey. Bryan Sayer was the programmer for the analysis of the uninsured.

Francis S. Pierce edited the manuscript, Nancy H. Brooks provided editorial assistance, Julia Jacobson provided research assistance during the final stages of the paper, and Sharon Corbin-Jallow typed the numerous drafts. Kathryn Quattrone prepared the report for publication.

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SUMMARY

Although the United States is a leader in medical research and has the capability to deliver the highest quality health care, criticisms of its health care system have been growing over the past decade. These criticisms have focused on two principal features of our system.

- Spending per person for health care in the United States is very high compared with other industrialized countries, and total national spending for health is increasing more rapidly than national income; and

- Many people in the United States lack financial access to health care--that is, they are uninsured and ineligible for existing public health care programs.

The United States spends much more per capita for health care than other industrialized countries. In 1987, the United States spent 11.2 percent of gross domestic product (GDP) on health care, compared with 8.8 percent in Canada, 8.1 percent in West Germany, 6.8 percent in Japan, and 6.1 percent in the United Kingdom. Moreover, the differential between the United States and other countries' spending on health care as a share of GDP has increased dramatically since 1965. This increase in health spending also has significant implications for the federal budget. In 1980, 11 percent of the federal budget went to health care. CBO projects that health spending will be nearly 20 percent of the budget by 1996.

THE HEALTH SECTOR

Many factors contribute to the high and rapidly rising costs of health care per capita, including an aging population and more effective and costly medical technologies that are being developed on a continuing basis. Many observers, however, suggest that a major reason for high and rapidly rising health costs is the failure of the normal discipline of the marketplace to limit the quantity of services supplied, resulting in

part from the fact that consumers pay less than the full price of the services they purchase.

In the health services market, the conditions necessary for the existence of a fully competitive market are not met. In particular:

- Uncertainty with respect to the occurrence of illness has led to the development of extensive insurance of a type that encourages consumers to purchase more and higher quality services than they would in the absence of insurance;

- The complexity and rapid technological change in medical services and uncertainty about the efficacy of treatment have led consumers to delegate much decisionmaking to providers; and

- Entry by providers into the industry is severely regulated, knowledge about differences among providers is not commonplace, and in many cases there are few competing sellers.

The role of insurance in the health sector is critical to understanding the imperfections in the market for health services that contribute to high and rapidly rising costs. Thus, the characteristics of these two markets, and recent trends that affect their performance, provide background for the examination of the effectiveness of strategies for controlling costs.

The Market for Health Insurance

In 1990, about 70 percent of the population under the age of 65 had health insurance through some employment-based group. The growth in employment-based health insurance since the 1940s has been influenced by the lower premiums that can be charged for group health insurance compared with those for individual policies. These lower premiums are possible because risks are more predictable for larger groups and because administrative costs are lower as a share of benefits for groups. An additional factor in the growth of employment-based insurance is that employer-paid fringe benefits are excluded

from the taxable income of employees. This exclusion will save individuals an estimated $56 billion to $58 billion in federal, state, and local taxes in 1991.

Although employment continues to be the principal source of health insurance, the availability of employment-based coverage has been reduced by changes in the private insurance market over the past decade. Many of these changes occurred in response to rapid increases in the costs of health care. A related impetus for change was the development of policies intended to control rising health care costs that encouraged competition among health insurers and increased choices of insurance arrangements available to consumers.

First, between 1980 and 1990, enrollment in health maintenance organizations (HMOs)--that is, combined insurance-service delivery systems--has risen nearly fourfold to 35 million people. HMOs offer a defined network of providers to their members, and are able to exert substantial control over the practice patterns of these providers. As a result, they have the potential to provide comprehensive health services for lower premiums than those of traditional insurers.

Second, traditional insurers have moved away from community rating, using experience rating instead. Under community rating, premiums are based upon the expected costs per person of providing insurance in a geographic area, averaged over the entire insured population. When experience rating is used, insurers base the premium for a given group on the average expected costs of insuring that group alone. Experience-rated premiums are lower--relative to community-rated premiums--for groups that are expected to have fewer health problems than the average in the community. The other side of the coin, however, is that premiums are higher for those that are expected to have more health problems than average, compared with community-rated premiums.

Third, rapid increases in the cost of health care have also affected the level of premiums for health insurance. Between 1977 and 1987, the average real premium paid by employers rose from $1,111 to $1,656 (in 1987 dollars), or by 49 percent. Because the costs of health insurance are a larger share of compensation for lower-wage workers,

the dramatic rise in premiums has reduced employment-based coverage for them more than for higher-wage workers.

The Market for Health Services

Several characteristics of the market for health services are important in explaining the level and trends in health spending. One change that has affected the market is the increase in the supply of physicians relative to the population over the past two decades--from 1.6 per 1,000 population in 1970 to 2.4 per 1,000 in 1990. The availability of more physicians has improved access to health services in areas that were previously less well served and has made physicians more willing to participate in managed care arrangements and to negotiate discounts on prices.

Since physicians can influence the demand for medical services, however, the greater prevalence of negotiated discounts has not resulted in a decline in physicians' incomes. Instead, as prices have been constrained, the volume of services provided has risen. This increase may have resulted, in part, because consumers are likely to want more at the lower price, but it also resulted because physicians can increase the number of services they provide or change the way in which their services are counted or billed. Evidence from the experience under Medicare indicates that, when prices decline, the volume of services increases sufficiently to offset about half of the potential reduction in spending that would otherwise have resulted from the price decrease.

In addition, some analysts believe that rapid technological change explains a significant portion of the increase in real health care spending per capita that has occurred over the past two decades. The present financing system for health care encourages the rapid dissemination of new technologies--access is available quickly for those with insurance or who can afford to pay directly--but excess capacity can easily develop. Excess capacity can then lead to overuse of these technologies, with higher costs resulting and with potential for harm to patients because of side effects or other complications associated with medical interventions.

The market for health services has also been influenced by the continuous decline over time in the out-of-pocket costs for health services paid by consumers. Although consumers partially pay for their health services through insurance premiums, taxes, and lower direct wages, their decision to use a specific health service is influenced by the direct out-of-pocket cost for that additional service. The decline in the proportion of costs paid out of pocket--from 46 percent in 1965 to 23 percent in 1980 and to 21 percent in 1989--has led to a rise in the quantity and quality of services consumers have purchased over the past decade, perhaps obscuring some of the effects of policies aimed at reducing the rate of increase in health spending over that period.

Finally, the medical malpractice environment has been cited as contributing to rising health costs. Although only about $5 billion--or 0.9 percent of all spending for health--was spent on medical malpractice premiums by all types of medical providers in 1988, the malpractice climate may also affect patterns of practice in ways that indirectly raise costs. For example, physicians may increase testing beyond the medically necessary level in the face of potential liability lawsuits and in the absence of agreed-upon practice guidelines.

Performance of the Health Sector

The characteristics of the markets for health insurance and health services combine to create a number of outcomes in the health care sector that are perceived to be problems. Three major problems are:

- The proportion of people without health insurance coverage has been growing over time--from 12.2 percent in 1978 to 15.7 percent in 1989--and the proportion of workers with insurance has been falling.

- Administrative costs associated with health care spending account for a high proportion of the costs of health care in the United States because of our multiple payer system, which requires tracking eligibility, marketing, risk assessment, monitoring of individual patient encounters, and a unique set of prices for each payer. In 1987, insurers' administrative

costs were $23.9 billion, or 4.9 percent of spending in the United States, compared with 2.5 percent in Canada and 2.6 percent in the United Kingdom.

- Despite the exceptionally high level of spending for health care in the United States, health outcomes such as infant mortality rates and life expectancy at birth are no better here than in other industrialized countries.

Although the United States spends more than other industrialized countries, some specific aspects of our system that contribute to these higher per capita costs are perceived by many people to be desirable. For example, we value speed and accuracy of diagnosis and a short length of time between diagnosis and treatment. We also devote significant resources to basic medical research that yields improvements in diagnosis and treatment. Moreover, the current financing system permits rapid dissemination of new technologies, extending the benefits of research to the insured population with minimal waiting times.

POLICIES TO CONTROL HEALTH CARE COSTS

In response to concerns about rising health care spending and prices, many strategies for controlling health care costs have been developed and carried out during the past two decades, especially during the 1980s. Despite these efforts, spending on health has continued to rise at a dramatic rate. The variety of approaches adopted reflects the fact that controlling costs is a complex problem and that, in the United States, the market for health services is a diverse and uncoordinated system.

Cost Sharing

Although cost sharing by consumers has often been discussed as a potentially effective strategy for controlling health care costs, out-of-pocket spending for health care declined from 23 percent of total costs in 1980 to 21 percent in 1989. Even so, the United States remains significantly different from most other countries. For example, out-of-

pocket costs are 7 percent in West Germany and 3 percent in the United Kingdom.

Evidence from studies of the effect of cost sharing on spending for health services does, however, suggest that if the average coinsurance rate in 1989 had been increased from 21 percent to 31 percent, a decrease in spending of between 1 percent and 2 percent would have occurred--or about $6 billion to $12 billion in 1989. This reduction in spending would probably result from fewer initial visits to ambulatory providers and would have more impact on the poor than on other consumers.

Managed Care/Controls on Use

Because there is evidence that many of the health services provided to consumers are unnecessary or inappropriate, managed care has been widely advocated in the United States since the early 1970s as a strategy for controlling costs. Managed care includes third-party payers' review and intervention in decisions about health services to be provided, and limitations on patients' choices of providers. Studies of its effectiveness suggest that managed care has a potential to reduce health care spending--although its effectiveness varies depending on the strength of the controls employed. The impact on health care spending is achieved through a one-time reduction in levels of use; managed care does not appear to affect the rate of increase in spending over time.

Effective managed care for one group of patients, however, does not necessarily slow the growth in total expenditures for all patients. Our fragmented system of financing makes it possible for providers to expand services and raise prices for other patients not getting managed care. The substantial administrative costs of managed care also offset some of the savings from using fewer services.

In contrast to the approaches to controlling use of services employed in the United States, several other industrialized countries monitor and review providers, rather than individual patients and procedures. This process is applied uniformly and comprehensively to

all physicians, to identify those whose service patterns deviate from their peers. When indicators such as referral patterns, numbers of procedures and tests performed, and numbers of repeat visits deviate from the norm, committees monitoring regional health systems then review these physicians and, if warranted, penalize them.

Price Controls

Price controls on medical care have been imposed several times in the United States. Overall, the evidence from the Medicare experience of the potential effect of price controls on health care costs suggests that more services are provided when prices are reduced across the board; price controls on one type of service create incentives for providers to substitute other services for the controlled one; price controls established for a specific population group (such as Medicaid enrollees) may result in higher prices charged to other population groups; and, when prices are controlled for only some groups, they may have less access to care. Thus, unless price controls are combined with systematic monitoring and review of all providers to prevent the volume of services from rising, their potential to solve the problem of health care costs is limited.

Competition

Competition among insurers and providers has increased over the past decade. The number of insuring organizations has grown, and many employees are offered a choice among several insurance packages--sometimes with financial incentives to choose lower-cost, more efficient plans. The number of physicians relative to the population has grown, and physicians are now less able to control competition from other providers who perform services that overlap with those of physicians--and who generally charge lower prices than physicians for these services. Advertising by physicians, hospitals, dentists, and other providers--which was prohibited by medical ethics and state regulations in the past--has now become an accepted practice.

If competition were an effective strategy for controlling costs, health care costs--particularly in areas that have become much more competitive--should have risen more slowly over the past decade than they have. This outcome would not necessarily occur, however, if nonprice competition was the predominant response to changes in this market. Some research suggests that greater competition has led to product differentiation and higher costs in the health care market, rather than to lower prices and greater efficiency. The competition strategy, however, has not been fully put into place. Moreover, approaches to cost containment that rely on changing the conduct of markets may require substantial passage of time before the full effects are evident.

Regulation of the Market for Health Services

Because past efforts to control costs have had limited effect, some people have concluded that greater regulation of the market for health services is necessary. Regulatory strategies attempted in the United States include the federal health planning and certificate-of-need programs and the state all-payer rate-setting programs for hospitals. In addition, strategies used in other countries--global budgeting and expenditure targets--might be effective here.

Health Planning and Certificate-of-Need Programs. The Health Planning and Resource Development Act of 1974 required that all states receiving federal health resources enact certificate-of-need (CON) laws--providing for state review and approval of planned capital investments of health care institutions. By 1980, all states except Louisiana had enacted CON laws. Subsequent research on their effectiveness consistently found that they did not restrain hospital spending and, in 1986, CON requirements for states to receive federal funds were dropped. Those who support health planning and CON requirements suggest, however, that CON in most states was applied in an erratic and politically motivated way that was not consistent with cost-consciousness and the orderly adoption of new technologies.

The governments of some other countries control the capital acquisitions of hospitals. In Canada and the former West Germany, for

example, hospitals apply to the regional government for capital expenditures and the regional government provides funding only for approved investments. In Great Britain, the central government determines the national budget for capital costs, and decisions about capital acquisition are made at varying geographic levels depending on the type of expenditure. These restrictions on capital acquisition, which keep costs down but also tend to limit access to new technologies and treatments, appear to have led to a lower rate of technological diffusion than in the United States.

State All-payer Rate-setting Programs. During the past two decades, four states put in place statewide all-payer hospital rate regulation programs. Under these programs, the state establishes the reimbursement methodology under which hospitals in the state receive uniform payments for specific services from all third-party and direct payers. Results of nearly all of the studies of these systems find that they initially lowered costs by from 2 percent to 13 percent, and that they cut the rate of growth in hospital spending substantially below what would be expected in the absence of an all-payer system.

Controls on Expenditure Levels. Another regulatory mechanism for controlling health care costs is to set limits on spending prospectively. This can be done through global budgeting, under which the government sets the operating budget in advance for specific providers--most commonly hospitals. Or it can be done through caps on expenditures, under which the government sets either a fixed budget that absolutely controls spending levels or a target that triggers penalties if it is exceeded. While other countries have relied extensively on expenditure targets to influence physician spending, the Medicare volume performance standards for physicians put into effect in 1990 is the first such attempt in the United States. Some other industrialized countries combine expenditure targets for physicians' services with ongoing monitoring of the practice patterns of individual physicians, in order to reduce the potential for some physicians to increase their incomes at the expense of others.

If they are strictly applied, global budgeting and expenditure caps for overall spending or for types of services can limit the level and rate

of growth of health care spending. Depending on how tightly they are set, however, they could adversely affect quality or access to care.

THE POTENTIAL FOR CONTROLLING RISING HEALTH CARE COSTS IN THE UNITED STATES

Control of health care costs--through either a one-time drop in spending or a lower rate of increase--is much more difficult to achieve in the United States than in countries that have chosen to develop a coordinated national health care policy or a national health system. In the United States, attempts to control health spending in one segment of the market or for specific groups of consumers may sometimes be successful for the part of the market affected. The impact on overall health spending in the nation may be much less, however, since providers may compensate for lower revenues from one segment of the market by increasing prices for, or the quantity of services provided to, other groups.

During the 1980s, a number of strategies to control health care costs were carried out. Although it is difficult to quantify the overall effect of each change separately, there appears to have been little impact on the growth in total health spending. The average annual rate of increase in real health spending per person was 4.3 percent between 1980 and 1985 and 4.6 percent between 1985 and 1989. In addition, the share of GDP devoted to health spending rose from 9.2 percent in 1980 to 11.7 percent in 1989.

Evidence from other countries, and from research, suggests that it may be possible to achieve greater control over health care spending in the United States than has been apparent over the past decade. It would be necessary, however, to make changes in the financing and delivery of health care. Several policies, used in combination, could substantially increase our ability to control health care spending. These policies include: elimination of first-dollar coverage under insurance policies; uniform utilization monitoring and review applied to all physicians rather than to individual patients and specific procedures; uniform payment levels that encompass all payers (including a prohibition against billing patients for any additional amounts);

health planning that establishes capital and technology targets relative to population at national and regional levels, and that does not reimburse for services provided through unapproved purchases; and effective national and regional budgets for overall spending or expenditure targets for specific types of spending.

Without significant changes, the United States is unlikely to achieve much greater control over health care spending than it has in the 1980s. Moreover, the consequences of failure to obtain the benefits of effective cost containment will be many, including making it more difficult to address the other major failure of our health care system--the large and growing number of people in the United States without health insurance coverage.

To change the present system, however, we would have to make some concessions. Greater control over health care spending would probably mean less spending on research and development, longer waiting times for use of new technologies, and limitations on our existing choices of providers, health care coverage, and alternatives for treatment. Whether these trade-offs are desirable depends on the priority the nation places on controlling costs as against maintaining other characteristics of the current health care system.

CHAPTER I

INTRODUCTION

Although the United States is a leader in medical research and has the resources to provide the highest quality health care, criticisms of its health care system have been growing over the past decade. These criticisms have focused on two principal features of the system:

- Spending per person for health care in the United States is very high compared with other industrialized countries, and is increasing more rapidly than national income; and

- Many people in the United States lack financial access to health care--that is, they are uninsured and ineligible for existing public health care programs.

A number of policies have been proposed--and some implemented--with the goal of reducing the level of health spending and/or its rate of growth. These policies include consumer cost sharing, managed care, competition among providers and insurers, price controls, and regulation of the market for health services. Despite the attention directed to this issue, national health care spending has continued to rise faster than the gross national product (GNP)--reaching 11.6 percent of GNP in 1989. The Health Care Financing Administration has estimated that spending for health will reach 15 percent of GNP by the year 2000. In addition, the cost of health care has implications for the federal budget. In 1990, health spending accounted for 14 percent of the budget, and the Congressional Budget Office has projected that 19.5 percent of the federal budget will go to health spending by 1996.

The apparent inability of the United States to control spending for health is of particular concern at a time when about 33 million people have no health insurance coverage, since rising health care costs exacerbate that problem. In the private sector, increasing health care costs have led to rapid rises in the health insurance premiums offered to em-

ployment-based groups, and to increased competition among insurers to write policies for the healthiest groups that offer the lowest financial risk. Large groups can spread costs over a substantial number of individuals and families, while small groups do not have enough members to spread these risks if some members of the group have serious health problems. Consequently, small groups face premiums that are prohibitive or find it difficult to obtain insurance at all.

Many factors contribute to the high and rapidly rising costs of health care per capita in the United States, including an aging population and the continued development of more effective and costly medical technologies. However, a major reason for high and rapidly rising health costs may be the failure of the normal discipline of the marketplace.

TRENDS IN SPENDING AND PRICES FOR HEALTH SERVICES

In 1989, the United States spent $604 billion on health care. This amount was nearly three times the $204 billion (in 1989 dollars) spent in 1970. Real health care spending per capita in the United States rose from $950 to $2,354 (in 1989 dollars) between 1970 and 1989--an average annual real growth rate of 4.9 percent over the 19-year period. This growth rate reflects increases in quantity of services per capita, changes in quality, and increases in the price of medical services above general inflation in the economy.[1]

The United States spends much more per capita on health care than other industrial countries. While direct comparisons among countries are always difficult and need to be treated with caution, the United States' per capita spending on health is approximately one-third more than Canada's, double the spending of Japan and the

1. Evidence in this section is drawn from the Congressional Budget Office paper, "Trends in Health Spending by Medicare and the Nation" (January 1991). The major components of national health expenditures are described in Appendix A, which also examines health spending by source of payment and how these sources have changed over time.

former West Germany, and nearly three times the amount spent in the United Kingdom.

This higher spending per capita also is reflected in the proportion of gross domestic product (GDP) spent by each of these five countries on health care in 1987. The United States spent 11.2 percent of its GDP on health care in that year, while Canada spent 8.8 percent, former West Germany 8.1 percent, Japan 6.8 percent, and the United Kingdom 6.1 percent (see the Figure). In contrast, the share of GDP spent on health in 1965, and the differences among these countries, were more modest--6 percent in the United States, 6.1 percent in Canada, 5.1 percent in former West Germany, 4.3 percent in Japan, and 4.2 percent in the United Kingdom.

This higher level of per capita spending in the United States is, in large part, the result of considerably faster growth in spending during the 1980s than occurred in the other countries, with the exception of Canada. Real per capita health spending in the United States rose 33 percent between 1980 and 1987. By comparison, the increase over this period was 38 percent in Canada, 13 percent in former West Germany, 31 percent in Japan, and 22 percent in the United Kingdom.

Within the United States, medical care prices increased much more rapidly between 1980 and 1988 than did prices of other major categories of expenditures. During the 1980-1988 period, the consumer price index for all urban consumers increased 36 percent for food, 44 percent for entertainment, and 57 percent for shelter, compared with 85 percent for medical care.

Providers of medical care in the United States appear to have gained substantially from the rapid growth in per capita spending and from the increases in prices that have occurred. Hospital margins on total revenues began rising in the early 1970s. From previous levels below 2.5 percent, they rose to 5.9 percent in 1985, declining to 4.8 percent by 1990.[2]

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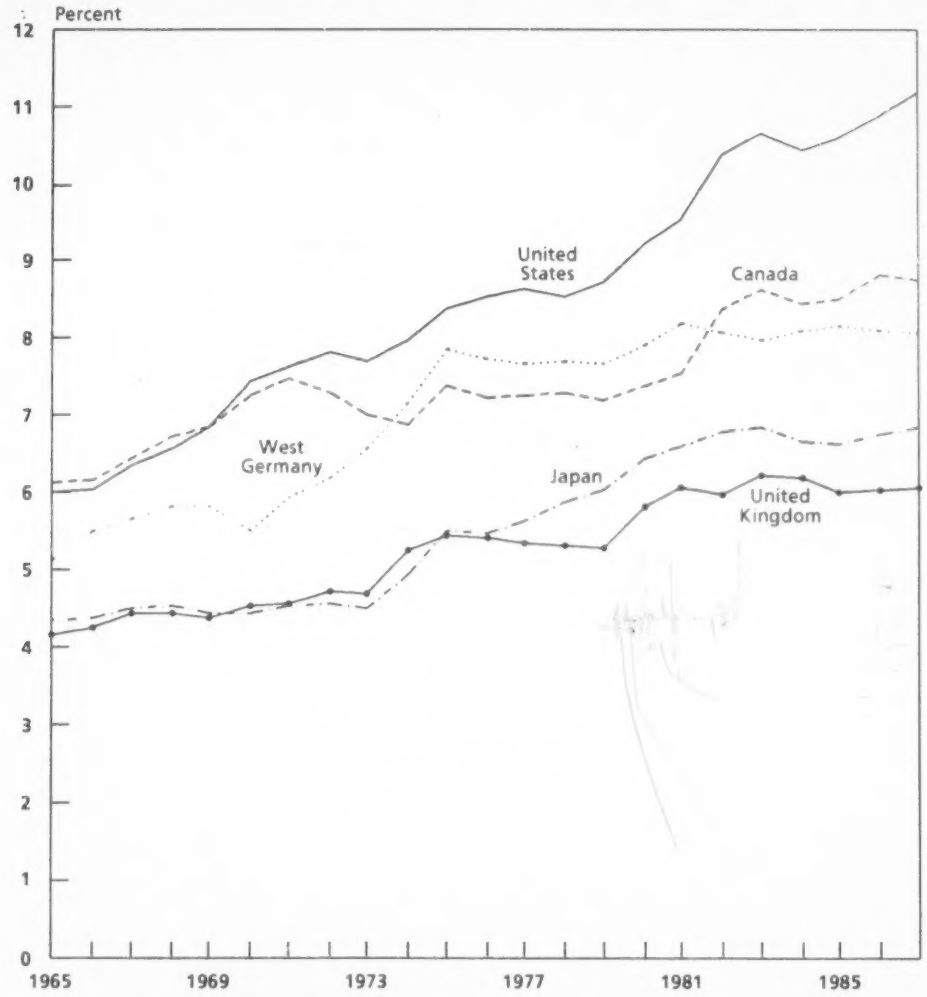
2. Hospital margins on total revenues are defined as the ratio of total revenues minus total costs to total revenues.

Health Expenditures as a Percentage of Gross Domestic Product, United States and Selected Countries, 1965-1987



SOURCE: Congressional Budget Office calculations based on data from the Organization for Economic Cooperation and Development, Health Data File, 1989, as reported in *Health Care Financing Review, 1989 Annual Supplement*.

NOTE: Gross domestic product is equal to gross national product less net property income from abroad. Use of GDP for international comparisons of health spending eliminates variations arising from differences in the role of foreign transactions in different economies.

Physicians' incomes have also increased relative to the average compensation of all workers in the United States. In 1980, the ratio of the average physician's earnings to the average worker's earnings in the United States was 5.0. This ratio had increased to 5.4 by 1987. In 1986, the last year for which data are available for all countries, the ratio of physicians' earnings to the average worker's earnings was 5.1 for the United States, 4.3 for former West Germany, 3.7 for Canada, 2.5 for Japan, and 2.4 for the United Kingdom.

IMPLICATIONS OF HIGH AND RISING HEALTH CARE COSTS

The United States health care system is able to provide the highest quality care, without delays in access, to those who have health insurance or can otherwise afford it. In addition, the United States devotes considerable resources to medical research and provides support for the rapid dissemination of new medical technologies throughout the nation. United States consumers also have more freedom to choose providers, service delivery systems, treatment methods, and insurance coverage levels than do residents of most other industrial countries.

At the same time, the disadvantages of high and growing spending for heath care are also evident. The more the nation spends on health care, the less income--both private and public--is available to spend on other goods and services. And continuing increases in health care spending per capita make it more difficult to address the problems of the uninsured population--since most remedies would result in even higher private and public spending.

A decision to adopt effective strategies to control costs will require weighing the advantages of the current system against the disadvantages of a continuing increase in health spending relative to income. This paper provides background and information on the trade-offs that such a decision would imply.

CHAPTER II

CHARACTERISTICS OF THE HEALTH SECTOR

Although rapid increases in expenditures and dramatic growth in prices can occur under a variety of conditions, the persistence of these phenomena in the market for health services is often cited as evidence that the market is not functioning well in comparison with the markets for other goods and services. This chapter, therefore, begins by contrasting the market for health services with those for other goods. This background is provided for readers who are interested in how markets function generally, in order to have a better understanding of the problems of the health care sector. Readers who already have this background may go directly to the next section of this chapter.

CHARACTERISTICS OF ECONOMIC MARKETS

A properly functioning competitive market is one in which supply and demand cause prices to tend toward the lowest level at which sellers are willing to produce and offer those goods and services desired by consumers. Competitive markets are considered desirable because they use scarce resources more efficiently as firms seek to produce each unit of goods at the lowest possible cost, and because the set of products that is most valued by consumers is produced. Consumers benefit because, at any income level, they are able to acquire more goods and services than in a market in which competition does not operate effectively. Under these conditions, sellers receive a sufficient, but not excessive, return on their investment. And, in a competitive market, incentives are present for firms to seek and adopt cost-saving technological innovations.

For a market to be effectively competitive, consumers and producers must have sufficient knowledge to make informed decisions; the number of buyers and sellers should be large; each seller's goods should be satisfactory substitutes for all other sellers' goods; and a change in

the quantity of goods available should not swing the balance of power toward either buyers or sellers.

While the ideal market structure, which would lead to perfectly competitive actions of buyers and sellers, does not exist, economists have debated the conditions necessary for effective competition. It has been argued that some departures from the perfectly competitive norm are not a barrier to achieving the long-run benefits of competition. Effective competition has been described as requiring that consumers act independently and knowledgeably, that there be many sellers and easy entry for more of them, and that products have close substitutes available.

If a market is functioning under relatively noncompetitive conditions, one might suppose that some people would benefit if changes were made that increased the degree of competition in that market. But economists hold that the effects of increased competition would depend upon the underlying factors causing the noncompetitive conditions in the market. Even if competition, under ideal conditions, leads to the most desirable outcomes for consumers, obtaining a closer approximation to competitive conditions does not always improve the outcomes. In fact, a partially competitive market, under some circumstances, may yield less beneficial results than a fully regulated market.[1]

The "Special" Economic Problems of the Health Care Market

In the health services market, the conditions necessary for the existence of a competitive market are not fully met. It departs from those conditions in the following ways:

- Uncertainty with respect to the occurrence of illness has led to extensive medical insurance of a type that encourages consumers to purchase more and higher-quality services than they would in the absence of insurance;

1. See R.G. Lipsey and K. Lancaster, "The General Theory of Second Best," *Review of Economic Studies*, vol. 24 (1956), pp. 11-32, for a more detailed discussion of this issue.

- The complexity of medical services, rapid technological change, and uncertainty about the efficacy of treatment have led consumers to delegate much decisionmaking to providers; and

- Entry into the industry is severely regulated, knowledge about the differences among providers is hard to acquire, and in many cases there are few competing sellers.

Economists argue that uncertainty about the incidence of disease and about the efficacy of treatment are the prime determinants of the special economic problems in the health care market, and that many of the institutional characteristics of medical practice appear to have evolved as ways to provide measures of certainty to this market. Thus, medical education and strict licensure restrictions guarantee that the physician has at least a minimal level of competence--an evaluation not possible for the consumer to make in advance of treatment. The inability of the consumer to be fully knowledgeable in choosing medical services leads to the delegation of decisionmaking authority to the physician. The physician, in this role, may feel a social responsibility to provide the best possible care without regard to cost. Finally, the uncertainty about the incidence of illness--and the potentially very high costs associated with treatment--lead to the purchase of health insurance that substantially reduces the role of price in consumers' decisions about the quantity and types of medical care to purchase.

As a result of programs such as Medicare and Medicaid, as well as private health insurance, substantial numbers of people face a low or zero out-of-pocket price for services. In addition, governmentally set prices for services provided to those eligible result in different prices for identical services provided to different populations. Government policy toward health care is also reflected in the tax subsidies of health insurance and health expenditures, which result in lower after-tax costs of these products to consumers.

Insurance is present in a number of markets and appears to have relatively less effect on behavior than in the market for health services. Automobile insurance and household insurance are widespread. These types of insurance, however, are designed to protect

against random, potentially very expensive events of a specific nature. Health insurance has evolved to provide financial protection against low-cost, predictable requirements for health services, as well as against the costs of random catastrophically expensive illness. The result of health insurance coverage that pays for routine and elective health services is that these services are used more than they would be in the absence of insurance. While few people would burn down their own homes because fire insurance offsets the cost of replacement, many people will visit the doctor more often or agree to elective surgical procedures of limited value to their health, if the out-of-pocket cost of doing so is so small that even minimal improvement in health status, functioning, or quality of life seems worthwhile to the consumer.

Recent trends both in the market for health insurance and the market for health services suggest that the consequences of market failure will continue to present a problem for the U.S. health care system. The characteristics of these two markets, and recent trends that affect their performance, provide background for the examination of the effectiveness of strategies for controlling costs.

THE MARKET FOR HEALTH INSURANCE

The market for health insurance has been changing in a number of ways over the past decade. These changes have been in response to the regulatory environment and to the many concurrent changes occurring in the market for health services, including rapid increases in health care costs. In turn, health insurance changes have implications for the overall performance of the health sector.[2]

2. Appendix B presents information on the extent of health insurance coverage in the United States and the major reasons for lack of health insurance.

The History of Health Insurance

Until the early years of this century, people had little concern about the costs of health care. Medical knowledge was limited, and most treatment occurred in the home. Hospitals were used primarily to provide services to those who had no one at home to care for them. While the patient might die, it was unlikely that the patient's family would have to declare bankruptcy as a result of the illness. Consequently, health insurance was generally unavailable before World War I. Only a few small commercial insurance companies offered accident and health protection, paying a cash indemnity to the individual if an accident or illness occurred.[3]

During the 1930s, many people found themselves for the first time unable to pay for routine health care. Hospitals and physicians experienced both reduced demand for their services and an increase in the number of patients unable to pay for services received. The response to this crisis was the development, with the assistance of hospital and physician organizations, of Blue Cross and Blue Shield insurance coverage for hospital and physician services, respectively.

Unlike commercial insurers of the time, Blue Cross offered insurance coverage that reimbursed the hospital directly for services provided (service benefits) rather than paying the patient a flat amount not directly related to the actual costs of the health care used--as insurance providing indemnity benefits had done. Blue Shield initially offered service benefits to low-income enrollees and indemnity coverage to higher-income enrollees. Over time, however, Blue Shield moved to service benefits for all its members. Some have argued that the development of service benefits coverage shifted control over health care financing from the patient to the provider.

Commercial insurance began to develop during the 1940s, prompted by the trend to employment-based health insurance that began during World War II. The purchase of health insurance through employment-based groups permitted health insurance premiums to be

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3. Much of the information in this section is drawn from Congressional Research Service, *Health Insurance and the Uninsured: Background Data and Analysis* (May 1988).

lower than was possible for individual insurance policies. Within any large group formed for a purpose other than the purchase of health insurance, the insurer can assume that the risk of high-cost illness is randomly distributed. Therefore, insurance can be provided for a premium that represents the average expected cost of health care in the group or geographical area. In addition, administrative costs of insurance include a substantial fixed component that is a smaller proportion of insurance costs as the group increases in size. The financial advantages of employment-based group insurance to employees were reinforced, during World War II, when wages were frozen but fringe benefits were not. In 1942, only 37 companies were writing group health insurance; by 1951, this number had risen to 212 companies. By 1990, about 70 percent of the population under the age of 65 had health insurance through some employment-based group.

A strong, additional impetus to the spread of employment-based health insurance was the exclusion of employer-paid fringe benefits from the taxable income of the employee. For an employee with a marginal income tax rate of 15 percent, a federal payroll tax rate of about 8 percent, and a state income tax rate of 5 percent, this tax exclusion means that $1 spent by the employer generates $1 of health insurance at a cost to the employee equivalent to 72 cents of after-tax cash income. As a result, employees have considerable incentive to negotiate for generous health insurance benefits, with the employer paying for a substantial proportion of them. In fact, the average employer contribution was about 83 percent of the total premium cost in 1987.[4] This exclusion will save individuals and businesses about $56 billion to $58 billion in federal, state, and local taxes in 1991.

Yet another aspect of the market for health insurance that may have considerable impact on its operation is the extensive regulation of the industry. Insurance regulation is performed at the state level and has differential effects on Blue Cross and Blue Shield plans, commercial insurers, and health maintenance organizations (HMOs). State regulation of insurance organizations has many features:

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4. See S. DiCarlo and J. Gabel, "Conventional Health Insurance: A Decade Later," *Health Care Financing Review*, vol. 10 (Spring 1989), pp.77-88.

- Companies must meet (and continue to meet) certain standards with respect to assets, reserves, and investments in order to be licensed--that is, permitted to operate in the state;

- Each company must file annual financial statements, and permit periodic detailed examinations by state insurance departments;

- Individual and group policy forms and, in some states, premium rates must be filed for review and approval with the state insurance commission;

- Arbitrary discriminatory differences in premium rates are prohibited under state fair trade practices acts;

- All states have adopted the Uniform Individual Accident and Sickness Policy Provisions of the National Association of Insurance Commissioners, which protect consumers through regulation of such factors as grace periods, proof of loss, cancellations, and claims procedures.

- All states have laws requiring insurers to provide particular benefits in their policies, although the specific mandated benefits vary.

In addition to regulations that affect the financial dealings of organizations that provide health insurance and that protect consumers, states also assess premium taxes on most types of insurance. This particular state practice has often distinguished between the Blue Cross/Blue Shield plans and commercial insurance plans, with the former exempted or assessed a lower tax. In many states, the Blue Cross and Blue Shield plans also gain from other differential regulation that applies, for example, less stringent asset requirements to those plans. In return for these advantages, they are often required by state law to have open enrollment periods and to offer individual and group policies, as are HMOs in some states. HMOs also may be subject to regulation of their service delivery systems under state agencies that oversee medical practice.

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Federal regulation that affects health insurers derives primarily from the Employee Retirement Income Security Act of 1974 (ERISA). ERISA preempts state laws affecting employer-provided plans when the employer chooses to self-insure--that is, to assume the risk of paying health claims directly rather than purchase health insurance for employees. Self-insured employers are exempt from state-mandated benefit laws, state taxes on insurance premiums, and other regulations that increase the cost of group health insurance. The exemptions, combined with the minimal requirements under ERISA, have encouraged self-insurance particularly among large employers.

Recent Trends in the Health Insurance Market

Over the past decade, there have been many changes in the market for health insurance affecting its structure and operations and, as a consequence, the availability of employment-based insurance. Many of these changes have been a response to rapid increases in the costs of health care over a relatively short time. A related impetus for change is the encouragement given to competition among health insurers and to increasing the choices of insurance arrangements available to consumers. These latter phenomena were the direct result of policies intended to control rising health care costs.

Alternative Insurance-Delivery Systems. The development and spread of combined insurance-service delivery systems, or HMOs, has had a substantial effect on the health insurance market. Because these insurers require that enrollees obtain services only from providers with whom the HMO contracts, and because they exert control over the decisions of contracted providers, HMOs have the potential to provide comprehensive health services for lower premiums than traditional insurers.

HMOs, in their current form, developed and gradually spread during the 1930s and 1940s, particularly on the West Coast. Their growth was slow, however, until the 1970s. In 1973, in response to a perception that HMOs were a more cost-effective means of delivering health care, federal legislation was passed that encouraged their growth. In 1980 there were 236 HMOs providing services to over 9

million people. By December 1989, there were 591 HMOs with nearly 35 million members.

To the extent that HMOs are better able to control the quantity and the costs of health services provided to their members than are traditional insurers, the increasing presence of HMOs may have encouraged traditional insurers to develop mechanisms that would allow them to compete with HMOs. Some of these mechanisms may be highly desirable--for example, adopting computer technologies for tracking enrollment and claims payments--in that they reduce costs of insurance without changing the product. Other responses may be less desirable, however. Traditional insurers may have become more selective about the insurance that they write, avoiding groups and individuals with characteristics that may indicate high risk, in order to offer lower premiums that are competitive with HMO premium levels.

Methods for Setting Premiums. A major factor in the success of commercial insurers during the 1940s and 1950s was their use of experience rating to set premiums for large groups. The use of information on the previous health care experience of large groups, particularly those that were composed of relatively young, healthy workers, generally resulted in premium levels that were lower than premiums based on community rating.

Community rating sets premiums based upon the expected spending within a community (defined as a geographic area) for a defined set of benefits, divided by the number of people in the community. Thus, community rating does not distinguish among individuals with respect to characteristics that may be reasonably expected to affect their health status.

As health care costs have risen, and as competition among health insurers has increased in response to policies intended to slow these cost increases, insurers have increasingly turned away from community rating and toward experience rating. Experience rating permits the insurer to set premiums for healthy groups at attractive levels, relative to premiums charged by HMOs and many Blue Cross and Blue Shield plans that use community rating methods for setting premiums. In addition to the competitive advantage offered by ex-

perience rating, the practice makes it possible for insurers to attract healthier risks into their insurance pool and, by setting high premiums for less healthy groups, to discourage provision of insurance through employment groups with high expected costs.

Another response to the higher costs of health care that affects the availability of health insurance is the practice of underwriting. Underwriting involves the setting of premiums, particularly for small employers and for individual applicants, based upon the insurer's assessment of specific risk factors for the group or person to be insured. Underwriting may include use of various sources of information (perhaps even including a medical examination) to assess the individual's health status, financial condition, and other risk factors. On the basis of underwriting, individuals and small employment groups may be denied coverage, charged a higher premium, or offered coverage only if high-risk employees are excluded or a waiting period (varying from six months to two years) is imposed before coverage begins for preexisting conditions.

Self-Insurance by Employers. The health insurance market has also experienced a recent shift toward self-insurance by larger employers. Self-insurance reduces employers' expenses for health benefits since they are exempted from state regulations, such as premium taxes and mandated benefits, that increase costs. Self-insurance also allows employers to avoid paying insurers a profit on the group policy (although they may continue to pay an insurer to serve as the administrative agent). In addition, self-insured firms retain control over the funds budgeted for health costs until claims are paid. In 1979, 19 percent of medium and large employers were self-insured. By 1987, 40 percent were self-insured.[5]

5. See Congressional Research Service, *Health Insurance and the Uninsured.* The data on self-insurance are obtained from the annual Hay/Huggins Benefits Report, an annual survey of medium and larger firms. Of the 896 firms surveyed in 1987, 3 percent had fewer than 100 employees, and 84 percent had 500 or more employees.

Rising Premiums for Health Insurance. The rapid rise in real spending per person for health in the United States is also reflected in increasing health insurance premiums. Be-tween 1977 and 1987, the average real premium paid by employers rose from $1,111 to $1,656 (in 1987 dollars), or by 49 percent.

The relevant measure of compensation, for both workers and businesses, is the total of wages and salaries plus the cost of fringe benefits. If the cost of fringe benefits grows faster than wages because of rising health insurance premiums, workers will receive a greater share of total compensation as fringe benefits and a lesser share as wages and salaries. Recent data indicate that business spending for health grew from 5 percent to 7 percent of total labor compensation between 1980 and 1989. Health benefits were 33 percent of total fringe benefits in 1980 and 46 percent in 1989.[6]

Because the costs of health insurance are a larger share of compensation for lower-wage workers, the dramatic rise in health insurance premiums has reduced employment-based coverage for them more than it has affected coverage for higher-wage workers. Some businesses with a high proportion of low-wage workers are apparently choosing not to provide health insurance at all because its cost would represent such a substantial addition to wages. In firms that do not offer health insurance, a high proportion of workers earn less than $10,000 per year. For example, in firms with 100 or more employees that do not offer health insurance, 52 percent of employees earn less than $10,000. In comparably sized firms that do offer insurance, only 13 percent of workers earn less than $10,000.[7]

A recent study examines trends in the percent of employees with employer-sponsored insurance, by earnings, over the 1979 to 1989 period.[8] Among workers who were not self-employed, not covered as a dependent on a private insurance policy, and not covered by a public program, the percent uninsured increased from 1979 to 1984, was

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6. See K. Levit and C. Cowan, "The Burden of Health Care Costs: Business, Households, and Governments," *Health Care Financing Review*, vol. 12 (Winter 1990), pp. 127-138.

7. See Health Insurance Association of America, *Source Book of Health Insurance Data, 1990* (Washington, D.C.: 1990).

stable from 1984 through 1987, and then rose again from 1987 to 1988. For low-wage workers (those earning less than $12,500 in 1989 dollars) the decline in the percent with employer-sponsored insurance was 10 percentage points or more over the 1979 to 1989 period--with the greatest decrease experienced by lowest-wage workers. By comparison, the percent of workers earning $20,000 or more with employer-sponsored insurance remained at 90 percent to 95 percent over the entire period.

These trends suggest that, if health care and health insurance costs continue to rise much faster than wages and salaries, the number of workers--particularly low-wage workers--not offered health insurance as a fringe benefit can also be expected to rise.

Consequences of Health Insurance for the Market for Health Services

Insurance performs the function of spreading risk across large groups, but also reduces the price consciousness of consumers in their decisions about the amount and type of insured services they purchase. This is particularly the case for health insurance, since it has evolved to include coverage for both routine health care services, with a significant elective component, and random, infrequent, catastrophic occurrences.

One consequence of lower price consciousness and the resulting increased use of health services in the presence of insurance is rising prices for services. Higher prices, in turn, create greater incentives to insure against the possibility of incurring substantial costs when health care is needed, as well as higher health insurance premiums.

The consequences of rising health care costs and their impact on the market for health insurance are reduced availability of insurance for employers with high-risk workers or in industries considered to be high-risk, premium levels that are sufficiently high that some employers choose not to offer health insurance, and exclusion of high-risk workers from group insurance coverage. These consequences appear to be most severe for small businesses with few workers among whom the

8. See R. Kronick, "Health Insurance in the United States, 1979-1989: The Frayed Connection Between Employment and Insurance" (processed), University of California, San Diego, La Jolla, California.

risk can be spread and for businesses with a high proportion of low-wage workers.

The increased competition among insurers, in response to policies intended to control health care costs, may also have resulted in higher administrative costs in the health insurance market. Every employer that offers multiple insurance options in effect creates several smaller insurance groups within the firm. The smaller the insured group, the higher are administrative costs as a share of the total premium. For firms with 1 to 4 employees, administrative costs are 40 percent of total benefit costs; for firms with 20 to 49 employees, administrative costs are 25 percent of benefits; but for firms with over 10,000 or more employees, administrative costs are only 5.5 percent of benefits.[9] Thus, smaller groups face a higher premium per worker for a standard insurance package. For example, to purchase $100 worth of health benefits for its employees, an insurance group with 10,000 employees would pay $105.50; to obtain the same level of benefits, an insurance group with fewer than five employees would pay $140.00.

In fact, administrative costs in the private sector are rising even more rapidly than the cost of health care benefits--229 percent compared with 110 percent between 1980 and 1989. By comparison, administrative costs for the Medicare program rose 104 percent over this period, while spending for benefits rose 172 percent. This continuing increase in administrative costs in the private sector is exacerbating the problems already facing small employers in obtaining and affording health insurance coverage for their employees.

THE MARKET FOR HEALTH SERVICES

The existence of widespread insurance against health care costs has contributed to the health care cost problem, through reductions in the price consumers pay for health services, and has interacted with

9. See Congressional Research Service, *Private Health Insurance: Options for Reform* (September 1990). Large firms, however, may undertake some of the administrative activities of insurance in order to obtain lower premiums from the insurer. If small firms are less likely to do so, then insurer-reported administrative costs may overstate the real relationship between firm size and costs.

several characteristics of the market for health services to have a pervasive impact on the provision of health care in the United States. Several characteristics of the market for health services that are important in explaining the level and trends in the health sector are: growth in the supply of physicians, physician-induced demand for medical services, the medical malpractice environment, cross-subsidization across services and payers, and technological change. In addition, the share of the cost of health care services paid directly by consumers over the past decade has declined.

Growth in the Supply of Physicians

The supply of physicians relative to population has grown rapidly over the past two decades--from 1.6 per 1,000 population in 1970 to 2.4 per 1,000 population in 1990. It is projected that, by the year 2000, there will be 2.6 physicians for every 1,000 persons in the United States. This growth was the result of policies implemented in the 1960s and 1970s that expanded medical school capacity. These policies were based upon a perception that there were not enough physicians to meet the needs of the population and that, because of the undersupply, some geographic areas and population groups were substantially underserved. Some advocates of increasing the supply of physicians also argued that organized medicine had deliberately restricted the number and size of medical schools to obtain greater market power and increase the incomes of physicians.

Several consequences of the increase in the supply of physicians have been noted. More physicians have chosen to locate in small towns and rural areas, resulting in better access to care for areas that were previously less well served. Physicians have also become more willing to participate in health maintenance organizations and other managed care arrangements, and negotiated price discounts between physicians and insurers have become common.

The increased supply of physicians has not, however, led to lower incomes for physicians. In 1970, physicians earned, on average, $113,192 (in 1987 dollars) after expenses but before taxes. By 1987, average net earnings had risen to $132,300. The American Medical

Association reports that incomes increased another 9 percent in 1988 and 8 percent in 1989--far more than the underlying inflation rate in the economy or the average growth in wages that year.

Physician-Induced Demand for Services

Physicians can influence the demand for medical services because patients have imperfect information about the potential benefits of various medical procedures and, therefore, delegate substantial decisionmaking power to physicians. In addition, insured patients are not particularly conscious of costs. Studies show that, when physicians' fees are controlled, spending does not fall by the difference between the unconstrained fee and the controlled fee times the quantity of services previously provided. Instead, evidence from the Medicare experience suggests that when fees are constrained, the volume of services increases, offsetting some of the savings that would otherwise have occurred.[10] While some of the observed response in volume to constrained fees is accounted for by consumers choosing to purchase more services at lower prices, the extensive degree of insurance in this market suggests that a substantial proportion of volume increases are the result of physicians' actions that increase the number of services or that change the way in which services are counted and billed.

Since each physician can generate demand for his or her own services, some observers suggest that the implications for policy decisions in this market are significant. Policies to control health care costs may be designed to affect the demand side of the market, under an assumption that consumers are able to affect providers' behavior through their decisions about what services they purchase and from whom. Physician-induced demand, however, suggests that demand-side strategies may be largely ineffective since physicians are able to offset consumers' decisions, at least partially. In that case, cost control may be

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10. See Congressional Budget Office, *Physician Payment Reform Under Medicare* (April 1990); J. Holahan and others, "Understanding the Recent Growth in Physicians' Expenditures," *Journal of the American Medical Association*, vol. 263, no. 12, p. 1660; and J. Gabel and T. Rice, "Reducing Public Expenditures for Physician Services: The Price of Paying Less," *Journal of Health Politics, Policy and Law*, vol. 9 (Winter 1985), pp. 595-609.

more effective if applied through regulatory controls on the supply side.

The Medical Malpractice Environment

Medical malpractice is the term used to refer to any deviation from accepted medical standards of care that causes injury to a patient. The legal system in the United States provides compensation to patients who are found to have suffered injury resulting from medical malpractice.[11]

The insurance industry offers insurance to physicians and other providers of medical services against the possibility of a legal judgment that medical malpractice has occurred, with an award of compensation. In 1988, the average malpractice insurance premium paid by self-employed physicians was $15,900. The premium level varied by specialty, however, from $35,300 for obstetricians/gynecologists to $4,400 for psychiatrists.

The perception that the medical malpractice environment is an important factor in the performance of the market for health services is based upon two concerns:

- Malpractice premiums are one component of providers' costs and, even though they are a small share of costs for most specialties, if they rise rapidly they will cause the prices of services to increase; and

- To avoid malpractice suits, providers may change their practice patterns in ways that reduce the probability of lawsuits and provide documentation that helps them to defend against suits that are filed.

11. Much of the information in this section is drawn from U.S. Congress, Committee on Ways and Means, *Medical Malpractice*, Committee Print 101-26, prepared by the Congressional Research Service, April 26, 1990.

Malpractice premiums have, in fact, risen dramatically over the years. Between 1982 and 1988, the AMA reports that malpractice premiums for self-employed physicians rose at an average annual rate of 18.3 percent. The share of practice revenues devoted to malpractice premiums increased from 3.1 percent in 1982 to 5.6 percent in 1988. Overall in the United States, $5 billion was spent on medical malpractice premiums by all types of medical providers in 1988. Thus, medical malpractice premiums directly accounted for 0.9 percent of all spending for health that year.

The practice of "defensive medicine" by physicians to protect themselves from medical malpractice suits may take the form of ordering additional tests, spending more time with patients, and maintaining more extensive medical records. Each of these responses has the potential to increase spending for health services over the level that would have prevailed in the absence of the current malpractice environment. It is possible, of course, that these responses also result in higher quality care and fewer injuries to patients from improper treatment.

But defensive medicine may take a different form. Physicians may cease to perform high-risk procedures, only treat low-risk patients, refuse to accept some types of patients at all, or retire from practice. These responses could reduce access to care for some individuals, depending on whether other physicians who responded differently were available in the same area. They could also, however, change the quality of care, depending on the relative competence of physicians who are most likely to restrict their activities.

The medical malpractice environment makes it more difficult to implement effective cost containment strategies. Physicians may be reluctant to incorporate consideration of costs into their practice decisions, in the face of potential liability lawsuits. From this perspective, the development of practice guidelines and results from research on the outcomes of different treatments may provide a foundation of knowledge that will enable physicians to make more appropriate and cost-effective decisions.

The Ability to Cross-Subsidize

The market for heath services has a substantial nonprofit segment. Over 85 percent of community hospitals and nearly 30 percent of nursing homes are either nonprofit or government-operated. As a consequence of the nonprofit nature of much of this market, combined with the presence of multiple third-party payers and the low level of consumer price-consciousness, some of these providers appear to subsidize some patients and services by setting higher prices for other categories of payers and services. Similarly, physicians can charge some patients--such as those without insurance--less or choose not to collect the balance of their bills. The implication of the ability to cross-subsidize is that insurers and patients with less market power may face higher prices and higher health insurance premiums that reflect, in part, the losses from third-party payers and patients whose payments are below the costs of the services.

If providers can cross-subsidize and set prices for some--but not all--patients, then attempts to control use of services and costs by one payer may result in higher spending by other payers. For example, the imposition of utilization controls by an HMO may lower hospital admissions and the number of days of hospitalization for members of that HMO relative to what would occur in the absence of the controls. This lower use does not, however, necessarily lead to a corresponding reduction in the nation's total spending for hospital services, since hospitals may be able to increase the prices or the amounts of services provided to non-HMO patients in order to compensate for their lost revenues.

Technological Change

The United States spends a substantial amount each year on medical research--about $10.2 billion in public funds alone in 1989. This basic research yields new diagnostic tools and treatments that increase the effectiveness of medical care--and their rapid dissemination is encouraged by the present arrangements for financing health care in the United States. But the system for reimbursing providers makes it possible for excess capacity to develop. Excess capacity can then lead to overuse of these technologies, raising health care costs and possibly

resulting in harm to patients from side effects or other complications associated with medical intervention. To date, however, for lack of data and in the absence of guidelines for establishing the clinically necessary supply of specific technologies, it has been difficult to quantify the general perception that excess capacity is a problem. Overuse of some technologies, however, is strongly suggested by studies showing that a substantial proportion of selected medical procedures performed are not clinically indicated.

In fact, there have been few attempts by third-party payers in the United States to limit the diffusion of new technologies. The current financing system for health care in the United States ordinarily reimburses for any diagnostic tests or procedures that are generally accepted as proven and not experimental. This open-ended financing, combined with the absence of any type of control on diffusion, results in much more rapid adoption of new technologies in the United States than in other countries. A recent comparison of the availability of six technologies in the United States, Canada, and former West Germany shows much greater capacity in the United States. For example, the numbers of open-heart surgical units per million persons were 0.7 in former West Germany, 1.2 in Canada, and 3.3 in the United States. Similarly, the United States had 3.7 magnetic resonance imagers (MRIs) per million persons compared with 0.9 in former West Germany and 0.5 in Canada.[12]

Some limited evidence suggests that the Canadian government has sometimes chosen to make use of the United States' investment in various technologies, rather than to increase its own capital investment. For example, one hospital in Buffalo, New York, reports that 50 of 100 patients receiving monthly lithotripsy treatments were doing so under a formal agreement with the province of Ontario. Patients in western Ontario who need cardiac surgery have been sent to a hospital in Detroit under an agreement initiated by physicians in Windsor, Ontario, and accepted by the provincial health insurance plan.[13]

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12. See Dale A. Rublee, "Medical Technology in Canada, Germany, and the United States," *Health Affairs*, vol. 8 (Fall 1989), pp. 178-181.

13. See J. Iglehart, "Canada's Health Care System Faces Its Problems," *New England Journal of Medicine*, vol. 322 (February 22, 1990), pp. 562-568.

The United States health care system, as it is currently configured, ensures rapid diffusion of new technologies and access to those technologies without a waiting period for those who have the ability to pay. It may also result in use that exceeds the appropriate levels, leading to higher costs and potential harm to some patients. Some observers have suggested that a substantial degree of control of health spending may only be achieved through efforts to restrict the rate of technological change and diffusion of new technologies, and to ration access to new treatments.

The Decreasing Role of Consumer Cost Sharing

In 1965, Americans paid nearly half of national health expenditures out of pocket, but by 1989 the consumers' out-of-pocket share had declined to 21 percent.[14] The expansion of private health insurance and of public programs that provide third-party payment on behalf of the elderly, severely disabled, and some of the poor have made it possible for consumers to purchase more services and higher-quality services while paying directly a smaller share of the costs associated with those services.

The share paid by consumers varies by type of service purchased, however. Out-of-pocket payments were 5.5 percent of total spending for hospital services and 19 percent of total spending for physicians' services in 1989. Third-party coverage of some other types of services is not so complete: consumers paid 44 percent of the costs of nursing home care and 58 percent of the costs of prescription drugs.

Coverage also varies by third-party payer. Medicaid pays essentially all the costs of health care needed by most beneficiaries, while Medicare pays only 45 percent of total health care costs of its aged and

14. Out-of-pocket costs are defined as those costs directly related to the use of health services--deductible amounts, coinsurance, and other copayment amounts--that are the responsibility of the consumer. Consumers also pay for health care indirectly through their health insurance premiums. Total household spending for health care is the combination of out-of-pocket costs and the household's share of health insurance premiums, but only out-of-pocket costs directly influence consumers' decisions about use of health services.

disabled enrollees.[15] In addition, out-of-pocket costs are open-ended under the Medicare program, unlike the provisions of most private health insurance policies that limit annual out-of-pocket costs. As a result, Medicare enrollees are at greater financial risk for high health care costs than are people covered by many other third-party payers. This financial vulnerability, however, does not cause most Medicare enrollees to become more price-conscious than other consumers because a market for supplementary insurance has developed to provide additional financial protection against their health care costs. About 80 percent of Medicare enrollees have Medicare supplementary coverage through a retiree health plan or through an individual medigap policy or are eligible for full or qualified Medicaid assistance.

Although consumers pay for their health care through insurance premiums, taxes, and lower direct wages, the decision to purchase a specific health service is influenced only by the direct out-of-pocket costs to the consumer for that additional service. The substantial reduction in the out-of-pocket price paid by consumers for health care means that consumers do not make decisions about purchases in this market based upon the full price of services. Thus, continuing decline in out-of-pocket spending as a proportion of total spending over the past decade probably lessened the impact of policies to reduce the rate of increase in health care spending over that period.

PERFORMANCE OF THE HEALTH SECTOR

In addition to the high and rising costs of health care, which were discussed in Chapter I, several other indications suggest that there are problems in the functioning of the health sector. These indications include: the substantial number of uninsured people, inefficiency in the provision of services, and health outcomes that seem poor relative to the level of national health spending.

15. Categorically eligible Medicaid beneficiaries are not required to pay any of their costs, with the exception in some states of minimum copayments. Those who are eligible for Medicaid under a medically needy program incur out-of-pocket costs in most states.

Number of Uninsured People

Despite the substantial spending for health care in the United States, a portion of its population is without financial access to medical services. In March 1990, over 33 million people under age 65 were without health insurance coverage.

The proportion of the population without insurance also has been growing over time--with the most substantial increase occurring between 1980 and 1984. In 1980, 12.5 percent of people under age 65 did not have health insurance, according to data from the Health Interview Survey. By 1982, the percent uninsured had risen to 14.7 with a further increase to 15.4 in 1984. Since 1984, the proportion of the population uninsured has increased only slightly to 15.7 percent in 1989. While some of the increase may reflect the loss of health insurance resulting from high unemployment during the recession of the early 1980s, the proportion of the population without insurance continued to grow through the economic recovery.

Most of the increase in the number of uninsured can be attributed to a decline in private insurance coverage--which fell from 78.8 percent in 1980 to 76.6 percent in 1989. Data from the Current Population Survey show that the percentage of workers covered by insurance through their own employers peaked in 1982, when 77.2 percent of full-time workers and 24 percent of part-time workers were insured. By 1987, the percentages of full-time and part-time workers with insurance through their own employers had declined to 73.8 percent and 21.4 percent, respectively. The proportion covered by insurance dropped in each major industrial category--in other words, the gradual shift of employment to the service sector explains only a small portion of this reduction in employment-based coverage.

Those without health insurance are, in general, least able to afford to pay for health care, and they use fewer physicians' and inpatient hospital services than do the insured. The groups most likely to be uninsured in 1990 were young adults, part-time workers, those with low incomes, and members of single-parent families. One study estimated that nonelderly adults who were without insurance for a full year were 25 percent less likely than the insured to use any physicians'

services and 54 percent less likely to use inpatient hospital services. Even when some services were used, the uninsured used fewer than the insured: 16 percent fewer physicians' services and 33 percent fewer hospital services.[16]

While some of the services forgone may be discretionary or of limited value, it appears that important medical services also are not obtained. A recent study indicates that, among those who were hospitalized, people without insurance were sicker when they arrived and were 29 percent to 75 percent less likely to undergo each of five medical procedures that are expensive and have a substantial discretionary element. Uninsured patients were significantly more likely to die in the hospital, even after allowing for the fact that they were sicker when initially hospitalized and other factors.[17]

Efficiency in Providing Health Care

Costs of health services are, in part, dependent upon the efficiency of the market. In an efficient market, the value of the marginal services received by consumers approximately equals the marginal cost of those services. In addition, health services are produced using the least costly combination of resources. The pervasive presence of health insurance in this market, combined with the delegation of much of the decisionmaking to providers, gives reason to believe there may be substantial inefficiencies in the health sector. These inefficiencies may lead to a greater quantity of services being produced, and to higher price levels, than would occur otherwise.

The presence of insurance that covers some services to a greater extent than others affects the quantity and mix of services that consumers obtain. For example, full coverage of inpatient care for psychiatric conditions, but limited coverage of outpatient psychiatric visits, creates incentives to use inpatient care rather than less costly

16. See S. Long and J. Rodgers, *The Effects of Being Uninsured on Health Care Service Use Estimates from the Survey of Income and Program Participation*, Bureau of the Census, SIPP Working Paper #9012 (1990).

17. See J. Hadley, E. Steinberg, and J. Feder, "Comparison of Uninsured and Privately Insured Hospital Patients," *Journal of the American Medical Association*, vol. 265, pp. 374-379.

and less intensive ambulatory care visits to a psychiatrist. Similarly, the exclusion of preventive services from insurance coverage may cause consumers to put off obtaining them, thereby developing illnesses that require costly treatment and result in loss of productive time for the patient.

Another potential source of inefficiency in this market occurs when prices are set by third-party payers and physicians respond by altering the quantity and mix of services they provide to consumers. To the extent that limiting physicians' fees results in their providing more services to consumers, for example, some waste is occurring unless the consumer was receiving too few services before the fee reduction, which seems unlikely.

Yet another concern, as discussed earlier, is that administrative costs account for a high proportion of the costs of health care. In 1987, administrative costs of third-party payers were $23.9 billion, or 4.9 percent of spending in the United States, compared with 2.5 percent in Canada, and 2.6 percent in Great Britain. Higher administrative costs of insurance in the United States are, in part, accounted for by the costs of determining eligibility for coverage, risk assessment, marketing, and coordination of benefits. In addition, the presence of multiple payers, negotiated prices, and the need for eligibility determination imposes significant administrative costs on providers who must collect payments from multiple sources, each with different procedures and paperwork requirements. These costs are reflected in higher prices for health services and for health insurance.

Health Outcomes

Other countries appear to spend less per person while ensuring that virtually all of their populations have access to health care. Even though they spend less per capita, health status indicators such as infant mortality and life expectancy at birth in these countries are comparable to, or better than, in the United States. In 1986, infant mortality as a percent of live births was .52 in Japan, .79 in Canada, .87 in former West Germany, and .95 in the United Kingdom, compared with 1.04 in the United States. Life expectancy of female new-

borns for these five countries varied in 1986 from a high of 80.9 years in Japan to a low of 77.5 in the United Kingdom--with the United States in the middle at 78.3 years. For male newborns, life expectancy at birth in 1986 ranged from 75.2 years in Japan to 71.3 years in the United States, with both former West Germany and the United Kingdom only slightly above the United States.

While differentials in these measures may be the result of factors other than health care spending, it appears that higher spending for health in the United States does not result in better outcomes--at least for those broad measures of health--for the U.S. population. A number of reasons may account for this. First, other countries provide financial access to care for their entire populations. The U.S. system includes a large group of people without any insurance coverage at all. In addition, U.S. health insurance coverage typically does not pay for routine examinations and preventive care, which may result in lower-income people not obtaining these services.

Other considerations, such as speed and accuracy of diagnosis, and the length of time until treatment, may also be of importance to the U.S. population. The United States devotes significant resources to basic medical research that yields improvements in diagnosis and treatment. And the current financing system permits rapid diffusion of technologies, making the benefits of research available to the insured population with minimal waiting times. In addition, consumers in the United States have substantial freedom to choose among providers, insurance packages, and treatment alternatives. Some of the higher spending in the United States probably reflects preferences for these outcomes.

CHAPTER III

POLICIES DESIGNED TO CONTROL HEALTH CARE COSTS

Many strategies intended to control health care costs have been put into effect during the past two decades, especially during the 1980s.[1] The variety of approaches reflects the fact that controlling costs is a complex problem, and that the market for health services in the United States is diverse and uncoordinated. When there is only limited price competition among providers, and when consumers delegate much of the decisionmaking about the services they purchase to providers, substantial inefficiencies appear to result. In consequence, health spending has continued to be much higher than in other countries and to rise at a dramatic rate.[2]

Among the strategies invoked to address the complex causes of rising health spending are:

- Policies to reduce the use of services by increasing the out-of-pocket price to consumers;
- Policies to limit the freedom of providers to determine the services that will be offered to consumers and the freedom of consumers to choose any provider, including organizations that provide managed care and controls instituted by third-party payers over the utilization of services.
- Direct controls over the prices of services;

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1. This study addresses strategies to control health care costs that have been put in place or considered for implementation in the health sector. Other policies external to the health sector may also affect the level and rate of increase of health spending. For example, during the 1980s changes in the Internal Revenue Code reduced the marginal income tax rate for virtually all taxpayers. To the extent that the tax subsidy to employment-based insurance affects decisions about health insurance coverage, the change in tax policy may have led to less extensive insurance coverage.

2. Appendix C contains descriptions of the health care systems of selected other countries whose cost containment strategies are compared in the text with policies used in the United States.

- Policies to encourage increased competition in the markets for health insurance and for health services; and

- Regulatory policies to affect the market for health services within defined geographic areas--for example, the all-payer systems for hospitals in several states.

COST SHARING

Many observers have cited the declining share of costs paid by consumers as a major cause of the rapid increase in spending for health services over the past two decades. The reduction in price consciousness of consumers leads them to purchase both more and higher-quality services. In addition, the modest cost sharing required for some services fails to provide consumers with adequate incentives to search for providers who charge less, and makes them relatively insensitive to price increases.

The most comprehensive study examining the response to varying cost-sharing provisions of insurance plans has been the RAND Health Insurance Experiment (HIE), conducted during the late 1970s and early 1980s. The study found a significant relationship between the use of medical services and the amount paid out of pocket. Spending per person was 45 percent higher in a plan that required no cost sharing compared with a plan that required 95 percent cost sharing up to an annual maximum of $1,000. The greatest decline in use of outpatient services occurred between a free (no out-of-pocket costs) plan and a plan with 25 percent coinsurance, however. Smaller changes in use of services occurred between the 25 percent coinsurance plan and the 95 percent plan. More specifically, analysis of the HIE data suggests that a 1 percent increase in the coinsurance rate would produce a decrease in expenditures of between 0.1 percent and 0.2 percent, for an insurance policy with a maximum out-of-pocket cap of $1,000.

Cost sharing did not affect all services and all consumers uniformly, however. For example, while cost sharing caused consumers to initiate fewer contacts with medical providers, there was little difference by plan in the number of services used once a contact was ini-

tiated.[3] Effects also differed by type of service: nearly all the impact of cost sharing occurred in outpatient services, and there were no significant differences in hospital admissions or in spending for hospitalized people enrolled in the different insurance plans. This may, in part, be the result of the maximum out-of-pocket liability being limited to $1,000.

Cost sharing clearly has the potential to reduce spending for health services. Had the average coinsurance rate for all U.S. consumers been 10 percentage points higher in 1989, health expenditures would have been 1 percent to 2 percent lower--roughly $6 billion to $12 billion less. The effects of a substantial increase in cost sharing, however, would vary among types of services and by characteristics of consumers. Ambulatory care services would be more responsive than others to increased cost sharing, with consumers seeking fewer initial visits rather than receiving less intensive visits. In addition, an across-the-board increase in cost sharing would have more impact on the poor than on other consumers--an outcome that might have adverse consequences for health status and access to care.

For increased cost sharing to affect health care costs would also require that a supplementary market for health insurance be prohibited. The experience with Medicare enrollees indicates that without such a prohibition a new layer of insurance complexity and administrative costs might develop on top of the already fragmented existing system.[4]

Although cost sharing is an effective strategy for reducing expenditures for health care, most other industrial countries impose only nominal or no cost sharing requirements. Only France imposes cost sharing that approaches the level in the United States. In that country, out-of-pocket payments make up 20 percent of national health expenditures. In Canada's health system, provinces may impose user fees or allow providers to bill patients directly for amounts greater than the government-set payments on covered services, but none do so

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3. See Manning and others, "Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment," *American Economic Review*, vol. 77 (June 1987), pp. 251-273.

4. In addition, coordination of insurance coverage would be required so that families with more than one earner would not avoid cost sharing through multiple insurance policies.

because federal funding is reduced dollar-for-dollar for such amounts. The exception is that patients can be billed for room and board in long-term care facilities. In former West Germany, out-of-pocket costs represent 7 percent of total health care expenditures. Patients pay primarily for over-the-counter drugs and to obtain better medical equipment than the sickness funds provide. In Great Britain, patient cost sharing represents about 3 percent of the cost of the National Health Service. Despite the lower levels of cost sharing in these other countries, each spends substantially less per capita on health than does the United States.

MANAGED CARE/UTILIZATION CONTROLS

Managed care has been widely advocated since the early 1970s as a strategy for controlling costs. The principal impetus to managed care is evidence that many of the health services provided to consumers are unnecessary or inappropriate. Managed care is directed toward intervening in the decisions made by providers of care in order to ensure that only appropriate and necessary services are provided. Managed care organizations base this intervention on information that is not generally available to consumers, and thus act on consumers' behalf.

Recent studies suggest that a high proportion of medical procedures performed are inappropriate. For example, one study of selected medical procedures provided to Medicare beneficiaries in eight states found that 17 percent of coronary angiographies, 32 percent of carotid endarectomies, and 17 percent of upper gastrointestinal tract endoscopies performed were inappropriate.[5] To the extent that these patterns persist across all medical services, the loss to society from provision of unnecessary and inappropriate services may be substantial. Managed care, based on guidelines for appropriate care and employing utilization review and feedback to physicians about appropriate care, is expected to reduce this loss.

5. See M. Chassin and others. "Does Inappropriate Use Explain Geographic Variations in the Use of Health Care Services?" *Journal of the American Medical Association*, vol. 258 (November 13, 1987), pp. 1-5.

In addition, some managed care organizations negotiate with providers to obtain the lowest price available for services. If this negotiated price leads to higher efficiency in providing services, then managed care may also reduce waste.

The term "managed care" encompasses a variety of interventions in health care delivery and financing. The major dimensions of managed care include:

- Reviewing and intervening in decisions about health services to be provided--either prospectively or retrospectively;
- Limiting or influencing patients' choice of providers; and
- Negotiating different payment terms with providers.

Each of these dimensions of managed care, however, is defined broadly and not all managed care organizations employ all of them.

Managed care is provided through Health Maintenance Organizations (HMOs), Preferred Provider Organizations (PPOs), and "managed" fee-for-service insurance plans that require utilization controls and review. Each of these approaches manages care in a different way, although the distinctions among them are not always clearcut. HMOs provide the greatest degree of intervention in health care decision-making through an integrated delivery and financing system. There is, however, great diversity among HMOs, with some offering completely integrated systems with provider networks that serve only HMO members and others offering insurance arrangements coupled with limitations on consumers' choices among fee-for-service providers in the community. PPOs attempt to influence patients' choice of providers through offering differential cost sharing that rewards the patient who selects a provider from the PPO network. What is characterized as "managed fee-for-service" ordinarily involves utilization review overlaid on a traditional insurance package.

During the 1980s, managed care--defined broadly--grew dramatically. The number of HMOs more than doubled after 1980, with nearly 35 million enrollees in 1989. Growth in the population covered by

PPOs was also substantial during the 1980s. In 1984, only 1.3 million households were eligible to use PPOs; by January 1989, over 18 million households were eligible to use PPO plans. Blue Cross and Blue Shield plans reported 52 percent of enrollees in managed care in 1989, including 6 percent in HMOs, 15 percent in PPOs, and 31 percent in managed fee-for-service plans.

Evidence as to the effectiveness of managed care in reducing expenditures for health care is limited, and much of the research was conducted in HMOs with fully integrated financing and delivery systems that are quite different from the majority of today's managed care organizations. These types of HMOs have been found to reduce hospital use by over 20 percent, after allowing for differences in the characteristics of HMO enrollees and nonenrollees. HMOs that are more loosely structured--and PPOs and managed fee-for-service plans--have much less effect on utilization, with research studies reporting impacts ranging from zero to about an 8 percent reduction in utilization.[6] Managed care's principal impact appears to be on hospital use, with ambulatory care either unaffected or increasing as services are shifted from inpatient settings to outpatient sites.

The actual reduction in spending for health services in managed care organizations is less than the reduction in use because the administrative costs of managed care are higher than those of unmanaged insurance plans. In addition, managed care, when it is successful in reducing spending, appears to have a one-time effect with no impact on rates of growth of health spending over time.[7]

Since it has been estimated that about half of the people in the United States with private insurance coverage were in managed care arrangements by 1989, health care spending could have been substantially lower by then if all managed care arrangements were as

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6. See W. Manning and others, "Health Insurance and the Demand for Medical Care"; R. Brown, *Biased Selection in Medicare HMOs*, Mathematica Policy Research, Plainsboro, N.J. (April 1987); P. Feldstein and others. "Private Cost Containment: The Effects of Utilization Review Programs on Health Care Use and Expenditures," *New England Journal of Medicine*, vol. 318 (1988), pp. 1310-1314.

7. See J. Newhouse and others. "Are Fee-for-Service Costs Increasing Faster Than HMO Costs?" *Medical Care*, vol. 23 (August 1985), pp. 960-966.

effective as the fully integrated service and delivery systems that appear to have the greatest success in affecting utilization. There are a number of reasons, however, why the growth of managed care may not have produced such a noticeable drop in health spending over this period:

- Not all managed care arrangements are equally effective--in fact, there is little evidence that loosely organized managed care produces any savings, and much of the growth in enrollment in managed care organizations has been among loosely organized types of arrangements.

- Substantial administrative costs are associated with managed care, and these costs may be sufficiently high to offset savings generated by modest reductions in hospital admissions or length of stay. In addition, administrative costs are higher, the smaller the insured group. Since HMOs tend to enroll a relatively small proportion of the employees from any one employer, their per capita administrative costs are high.

- The fragmented system of health care financing in the United States may make it possible for providers to expand the number of services and increase prices for other types of patients when managed care is successful in reducing utilization and expenditures for some groups of patients.

Other countries appear to monitor and review providers, rather than individual patients and procedures. In addition, they apply this process uniformly and comprehensively to all physicians in large geographic areas, unlike the uncoordinated review in the United States. For example, all Canadian provinces have systems to monitor physicians' practice patterns. These systems identify physicians who bring patients back when not clearly medically necessary, who order more laboratory work than other physicians, and who deviate in other ways from the expected pattern of care. In British Columbia, for example, physicians with statistical profiles more than two standard deviations from the average for the physicians' peer group (defined by

specialty and geographic area) are reviewed by a committee that can recommend penalties for cause.

Former West Germany, like Canada, monitors on a subnational level. Each region maintains a data system that has the capability to create profiles of physicians' practices with respect to services provided, patient mix, and the profiles of costs of the services provided. Physicians whose profiles deviate from their peer group may be reviewed by the regional committees and, if warranted, penalized.

In contrast, because comprehensive data on physicians' entire practices are not available to any one insurer in the United States, most utilization review and managed care involves review of specific patients' care and individual treatment decisions--for example, requirements for a second opinion before elective surgery is approved for payment.[8] This type of review requires substantial resources to identify cases for examination and considerable clinical knowledge to assess the appropriateness of the decision. Moreover, the review standards vary from insurer to insurer. A physician may have patients who are subject to utilization review processes that differ greatly, depending on the rules of their particular payer. Further, because providers are subject to varying standards, they may not respond by changing overall practice patterns.

PRICE CONTROLS

Expenditures for health care are determined jointly by the quantity and by the price of services used. Setting limits on prices that may be charged for services is another strategy for cost control that has been implemented in the U.S. health care system. Most recently, the Medicare program imposed a freeze on physicians' fees during the mid-1980s.

8. Some HMOs and PPOs monitor physicians, rather than reviewing individual patients and procedures. This appears to be most common in HMOs that pay contracted physicians a fixed amount per HMO enrollee. In these cases, the primary purpose of physician monitoring is to assure that the physician does not respond to the HMO's payment system by undertreating patients.

In the absence of any changes in the quantity or mix of services, a reduction in the price of a service should lead to lower total expenditures for that service, but changes in the quantity or mix of services typically do occur. For example:

- More services may be provided when prices are reduced;
- Price controls on one type of service create incentives for providers to substitute other services for the controlled one;
- Price controls implemented for a specific population group (such as Medicaid or Medicare enrollees) may result in higher prices charged to other population groups; and
- When prices are controlled for only some groups, those groups may have less access to health care than others.

Studies of the effects of fee freezes or controls on physicians' prices indicate that they result in a pronounced volume offset that substantially reduces the anticipated savings from these policies. Under the Economic Stabilization Program (ESP) in the early 1970s, for example, the number of services delivered to Medicare patients increased by about 10 percent during the first year of the ESP and by 8 percent to 15 percent (depending upon physician specialty) during the second year. As a result, the ESP was not effective in curbing increases in Medicare's program costs.[9] Similarly, increases in the volume of physicians' services during the Medicare physician fee freeze in 1984 to 1986 were associated with a continuing rate of increase in physician expenditures per enrollee of 10 per cent or more during each of the years that fees were frozen.[10]

Most states limit reimbursement to hospitals and physicians under the Medicaid program. Before the Omnibus Budget Reconciliation Act of 1981, states were required to pay hospitals according to Medi-

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9. See J. Gabel and T. Rice, "Reducing Public Expenditures for Physician Services."

10. See J. Mitchell et al. *Impact of the Medicare Fee Freeze on Physician Expenditures and Volume: Final Report*, December 1988. HCFA Cooperative Agreement 17-C-98758/1-03.

care rules, which relied on a reasonable cost methodology. The 1981 act allowed states to pay hospitals an amount that would cover only the costs of economically and efficiently operated hospitals. The typical Medicaid hospital payment per day is about 80 percent of the average per diem cost for Medicaid patients. Physician reimbursement under Medicaid has also been restricted. In 1989, Medicaid paid physicians about 69 percent of Medicare rates.

There is general agreement that these relatively low reimbursement rates have helped to reduce access to care for Medicaid beneficiaries, but less access does not necessarily mean that total costs are lower. Only about 75 percent of physicians are willing to treat Medicaid patients, whereas nearly all physicians treat Medicare enrollees. For some specialties, the Medicaid participation rates are even lower. For example, one survey showed that only about 55 percent of physicians providing reproductive health services treat Medicaid patients. Some physicians have reported that hospitals have discouraged them from admitting Medicaid patients. Partly as a result of limited access to services in physicians' offices, Medicaid patients seek care in hospital emergency departments and outpatient departments--which typically are more expensive--to a greater extent than patients with other types of health insurance.

The effect of Medicare's Prospective Payment System (PPS) for reimbursing hospitals on spending for hospital services appears to indicate that price controls may be an effective strategy for controlling spending in the hospital sector, particularly in combination with increased monitoring of use. The PPS offers hospitals a fixed payment, related to expected costs of treatment for specific diagnoses, for each hospital admission. The fixed payment creates incentives for hospitals to operate more efficiently and to discharge patients at the earliest time that is medically permissible.

During the first five years of the PPS, the average length of stay for Medicare enrollees declined 10 percent. Over the same period, partly because of the Medicare hospital utilization review process introduced concurrently with the PPS, admissions of Medicare enrollees fell 12 percent. Despite these dramatic declines in use of services, the average annual rate of increase of real Medicare spending for hospital

services per enrollee was about 1.3 percent per year between 1983 and 1988. This was, however, considerably lower than the 6.9 percent annual rate of growth per enrollee between 1980 and 1983.

A related issue is the impact of the PPS on spending for other health care services. Since hospital and physician services have a strong complementary relationship, the initial impact of the PPS was to reduce spending for physicians' services as fewer hospital days required fewer hospital visits by physicians. Subsequently, however, as physicians and hospitals adjusted to the new system, more services may have been moved out of the hospital and into ambulatory settings--leading to an increase in spending for physician and other outpatient services.[11]

Although the Medicare program sets hospital payment levels prospectively and, beginning in 1992, will use a fee schedule to reimburse physicians, reimbursement of providers in the United States has primarily been based on costs or charges. In addition, every provider has a unique set of charges and each payer may negotiate a discount on these charges with individual providers. One consequence of these pricing arrangements is that vastly different prices can be paid for the same service, even when that service is performed by the same provider. In addition, substantial administrative costs are incurred by third-party payers and by providers in the effort to keep track of all the different price arrangements.

Some other industrial countries rely on negotiations to establish prices for specific services. In former West Germany, for example, reimbursement for ambulatory care physician services is fee-for-service, based on a national relative value scale determined through negotiations between national associations of physicians and sickness funds. A conversion factor that translates the relative value scale into mone-

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11. See J. Holahan, A. Dor, and S. Zuckerman, "Understanding the Recent Growth in Medicare Physician Expenditures," *Journal of the American Medical Association*, vol. 263, no. 12 (March 23/30, 1990), pp. 1658-1661; and J. Mitchell, G. Wedig, and J. Cromwell, *Impact of the Medicare Fee Freeze on Physician Expenditures and Volume: Final Report*, HCFA Cooperative Agreement 17-C-98758/1-03 (December 1988). The best estimate from the Holahan study is that the net effect of the PPS on physician spending was to increase it by 18 percent. The best estimate from the Mitchell study would imply a 14 percent increase in physician spending because of the PPS. For both studies, however, this estimated effect is statistically insignificant.

tary terms is negotiated between regional associations of physicians and sickness funds in order to establish the fee that all physicians in the region will receive from the sickness funds for performing each procedure.

In Canada, physicians are also reimbursed on a fee-for-service basis, with payment rates established by a fee schedule negotiated by the provinces and physicians' associations. Similarly, in France, ambulatory care physicians are reimbursed on a fee-for-service basis, with the fees set by the government. In former West Germany, France, and Great Britain, physicians who provide services as part of a public hospital episode are paid a salary, rather than under fee-for-service arrangements.[12]

In some countries, these price controls for physicians' services are combined with utilization review mechanisms, as described earlier, that permit the identification of physicians and other providers generating more services than the norm. In former West Germany, the relation between price and volume is even more direct--when expenditures rise above the negotiated aggregate ceiling, fees paid to physicians are reduced proportionately.

Price controls may have greater potential for reducing health care costs when applied uniformly to the whole health care system, because cost shifting among services and payers is less likely to be an issue. In addition, access to care is not differentially affected if price controls are applied uniformly within a geographic area. Volume responses, however, would still be possible even within a national system of controlled prices and could be large enough to reduce potential savings substantially unless price controls were combined with systematic utilization monitoring and review of all providers.

12. In Canada, radiologists, anesthesiologists and pathologists providing care in hospital settings are also paid on salary. Other specialists receive fee-for-service payment.

COMPETITION

In the latter half of the 1970s, concerns about the imperfections of the market for health services and the consequences for total and public expenditures for health care produced a number of proposals that were expected, if implemented, to increase competition among insurers and among providers. Increased competition, in turn, was expected to result in downward pressures on prices and greater efficiency in the provision of health services.

In the years since the concept of a competitive strategy for controlling health care costs was introduced, a number of changes have occurred in the market for health services. The growth in the number of HMOs, partly in response to federal law that required employers to offer an HMO option, has increased the competitiveness of the health insurance market. Employees, if they are offered health insurance, typically have more than one plan to choose among, sometimes with financial incentives to choose lower-cost, more efficient insurer-provider arrangements.

Competition among providers of health care has also increased over the past decade. The number of physicians relative to population has grown, and physicians are now less able to control competition from other providers who perform services that overlap with those of physicians--and who generally charge lower prices than physicians for these services. Optometrists now can perform diagnostic tests for a number of eye diseases and can provide follow-up care for cataract surgery and other medical conditions under the Medicare program. Chiropractors have been successful in many areas in achieving an established role in health care, and in obtaining reimbursement from third-party payers. The corporate practice of medicine--in HMOs, urgent care centers, walk-in clinics, and retail store dentistry--is now widespread. Advertising by physicians, hospitals, dentists, and other providers now is an accepted phenomenon that was prohibited by medical ethics and state regulations in the past.

In contrast, competition among health plans has not developed as was originally envisioned, with health insurers contracting with a unique set of providers that serve only the insurers' enrollees. Instead,

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most of the rapid expansion in alternative insurer/delivery systems has occurred through PPOs and loosely structured HMOs that offer overlapping networks of providers that do not compete with one another. To achieve greater competition, some observers argue it would be necessary to establish discrete, non-overlapping provider networks so that consumers would be offered choices that are clearly different.

Other proposals to increase the competitiveness of the health care market, through increasing the cost consciousness of consumers, also have not been implemented. In particular, the share of health insurance premiums paid by employers remains fully untaxed, and without dollar limitations.[13] In fact, the development of cafeteria plans for fringe benefits now permits many employees to pay their own share of the insurance premium and other health expenses from pre-tax dollars.

Changes in the competitive nature of the market for health services would suggest that, if competition were an effective strategy, the rate of increase in health care costs in the United States would have declined during the 1980s, particularly in areas that have become more highly competitive. Although the number of studies on the impact of competition is limited, the findings suggest that:[14]

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13. A widely discussed proposal to change that tax treatment of employer-paid health insurance would cap the tax deduction at a specified annual amount, with employees incurring tax liability for employer-paid amounts above the cap. Employees would then have greater incentives to shop for the most cost-effective health plan. Even if the tax subsidy was entirely eliminated, group health insurance would tend to be less expensive than individual insurance and, therefore, groups would tend to be the principal insurance arrangement. These groups, however, might not form around employment but could instead result in additional fragmentation of the group health insurance market, particularly if insurers tended to group by health status.

14. See J. Merrill and C. McLaughlin "Competition versus Regulation: Some Empirical Evidence," *Journal of Health Politics, Policy, and Law*, vol. 10 (Winter 1986), pp. 613-623; J. Hadley and K. Swartz, "The Impacts of Hospital Costs Between 1980 and 1984 of Hospital Rate Regulation, Competition, and Changes in Health Insurance Coverage," *Inquiry*, vol. 26 (Spring 1989), pp. 35-47; J. Robinson and H. Luft, "Competition, Regulation, and Hospital Costs, 1982-1986," *Journal of the American Medical Association*, vol. 260 (November 11, 1988), pp. 2676-2681; C. McLaughlin, "The Effect of HMOs on Overall Hospital Expenses: Is Anything Left After Correcting for Simultaneity and Selectivity?" *Health Services Research*, vol. 23 (August 1988), pp. 421-440; G. Melnick and J. Danziger, "Hospital Behavior Under Competition and Cost Containment Policies," *Journal of the American Medical Association*, vol. 260 (November 11, 1988), pp. 2669-2675.

- The effect of competition on hospital costs is uncertain, with some studies suggesting competition lowers costs and others indicating costs are unaffected or higher in more competitive markets;

- Competition can lead to product differentiation and higher costs, rather than to price competition and greater efficiency; and

- A higher HMO market share may not be associated with lower hospital expenses per capita in a market area, even if per capita hospital expenses for HMO members are lower, apparently because of offsetting increases in hospital expenses for patients not enrolled in HMOs.

The evidence on the growth rate in per capita spending for health care over the past two decades also suggests that the competitive strategy, to the extent it has been attempted, has had, at best, only a small impact on health care costs.

REGULATION OF THE MARKET FOR HEALTH SERVICES

Economists generally justify regulation of an industry under several conditions: if the industry is a natural monopoly, if the industry is essential to the growth of other industries and the economy, or if for some reason competition does not work well in the industry. In addition, there is an assumption that regulation is only justified when the expected benefits of the regulation, such as improved performance of the industry, are greater than the expected costs. Using this logic, some policymakers have argued that greater regulation of the market for health services is necessary, because this market is not functioning properly in the United States and strategies to increase competition among insurers and among providers are ineffective or lead to even less desirable outcomes.

Only some of the generic elements of regulation--control of entry, price regulation, prescription of conditions and quality of services, and the imposition of an obligation to serve all applicants under specified

conditions--have been used in the United States in attempts to deal with the entire market for health services, rather than only the component of the market that is publicly financed. They include the federal health planning and certificate-of-need programs and the state all-payer rate-setting programs for hospitals. In addition to examining these two regulatory programs, this section also examines the global budgeting and related expenditure target strategies used in other countries.

Health Planning and Certificate-of-Need Programs

The Health Planning and Resource Development Act of 1974 required that all states receiving federal health resources enact certificate-of-need (CON) laws--providing for state review and approval of capital investments of health care institutions. Health planning, particularly with respect to capital investment in hospitals, was believed to be an important component of any effort to control rising health care costs. Research in the 1960s had shown a statistical relationship between the supply of hospital beds and the use of hospital beds. By 1980, all states except Louisiana had enacted CON laws.

Subsequent research on the effectiveness of CON consistently found that it was not effective in restraining per diem, per case, or per capita hospital costs.[15] At the same time, concern was expressed about the new distortions of the market that were introduced by CON activities, particularly with the impact of CON on the potential entry of new competitors into the market. Since CON was applied primarily to hospital investment decisions, there also was a perception that it caused investment to shift from hospitals to other health care providers to which CON did not apply.

In 1986, federal CON requirements for states to receive funds were dropped. Those who support health planning and certificate-of-need requirements, however, suggest that the experience of the 1970s and early 1980s did not reflect the full potential for health planning and

15. See L. Brown, "Common Sense Meets Implementation: Certificate-of-Need Regulation in the States," *Journal of Health Politics, Policy and Law*, vol. 8 (Fall 1983), pp. 80-494.

CON as a strategy for cost containment. They argue that CON was applied in most states in an erratic and politically motivated process that resulted in decisions about capital proposals that were not consistent with cost-conscious expansion of health facilities and orderly adoption of new technologies. In the few states where CON has been linked to hospital rate-setting and to statewide (rather than local area) health planning, proponents of CON suggest it has been much more effective in reducing growth in health care costs.

The governments of many other countries control the capital acquisition of hospitals. In Canada, hospitals must make separate applications to the provincial ministry of health for capital expenditures, including facilities, equipment, and renovations. While the provinces provide most of the financing for capital acquisition, hospitals must provide some funding themselves. Although hospitals may acquire enough private money for capital investments, the provinces can refuse to provide the associated operating costs for capital purchased without provincial approval.

In former West Germany, hospitals must submit a certificate-of-need application to the state government for capital spending, and state and local governments provide the funding. In France, the investment decisions of public hospitals are publicly controlled. While private facilities can make their own investment decisions, prices are set by the government, which indirectly influences the amount of capital that can be acquired.

In Great Britain, the central government determines a national budget for capital costs. Decisions about capital acquisition are made at varying geographic levels, depending on the type of expenditure. For example, decisions about facilities or equipment that would be used by patients from a wide area, such as CT scanners or a new hospital, are made at a regional or national level.

The restrictions on capital acquisition in other countries have led to lower rates of technological diffusion of medical equipment compared with the United States--as was noted in Chapter II--which keeps costs down, but also tends to limit access to new technologies and treatments.

State All-Payer Rate-Setting Programs

Four states implemented statewide all-payer hospital reimbursement programs during the 1970s and 1980s. Under these programs, the states established the reimbursement methodology and the actual rates that hospitals were paid in the state. All third-party and direct consumer payments to hospitals were then based on those rates. Hospitals operating in states with all-payer rate-setting systems received uniform payments for specific services. These regulatory programs offered the opportunity to examine the effectiveness of regulation when applied to all payers in a defined geographic area.

Maryland, New Jersey, New York, and Massachusetts had all-payer systems for hospitals in place for a period of years. The effectiveness of these state all-payer systems has been examined by a number of researchers. Results of nearly all of these studies find that all-payer rate-setting is associated with lower costs, ranging from 2 percent to 13 percent lower, and with reduced rates of increase in hospital costs over time compared with the increases projected in the absence of an all-payer system.[16]

Because of the perception that all-payer systems are an effective mechanism for controlling hospital costs, the federal government has allowed states to receive a waiver from the Medicare PPS if all payers are subject to regulation in the state and if Medicare outlays to hospitals in the state are less than or equal to what the expenditures would have been under the PPS. Initially, 14 states considered adopting all-payer systems in response to the waiver option. Only Maryland, New Jersey, Massachusetts, and New York, however, actually received waivers. New York and Massachusetts withdrew from the Medicare waiver program in 1985; New Jersey allowed its Medicare waiver to expire in 1989. At present, only Maryland continues to operate an all-payer system that includes Medicare under its rate-setting program.

16. See J. Hadley and K. Swartz, "The Impacts of Hospital Costs"; C. Schramm, S. Renn, and B. Biles, "Controlling Hospital Cost Inflation: New Perspectives on State Rate Setting," *Health Affairs*, vol. 5 (Fall 1986), pp. 22-33; M. Rosko, "A Comparison of Hospital Performance Under the Partial-Payer Medicare PPS and State All-Payer Rate-Setting Systems," *Inquiry* (Spring 1989), pp. 48-61; J. Hadley and S. Zuckerman, *Hospital Cost Variations Under PPS: Final Report* (August 1990), Contract No. T-56950489 for the Prospective Payment Assessment Commission.

Controls on Expenditure Levels

Another mechanism for controlling health care costs, within a regulatory framework, is to set prospective limits on spending. This may be done through global budgeting, under which the government sets in advance the operating budget for specific providers--most commonly hospitals--and through expenditure controls, under which the government sets a target for aggregate spending for health services. Expenditure targets have been used in some industrial countries to control spending for physician services. If these targets are exceeded, physicians are paid less per unit in the current period or the future. Expenditure caps are a stronger version of this approach, with spending absolutely limited in the time period to the amount defined by the cap.

The United States, to date, has not used either global budgeting or expenditure targets for cost containment, either at the federal or state level, with one exception. Under the Omnibus Budget Reconciliation Act of 1989, target rates of increase in physician spending under the Medicare program were implemented beginning in 1990. If the rate of increase in spending exceeds the target, physicians' fees under the Medicare program will be lower in subsequent years (beginning in 1992). Preliminary data for the first half of 1990 suggest that the rate of growth was 12.4 percent, substantially above the 9.1 percent target for 1990.

Even if Medicare's physician targets are successful in constraining the rate of increase in that program, the impact it would have on physician spending in the nation is uncertain. The imposition of targets only for Medicare, which accounts for about 30 percent of physicians' revenues, may result in changes in physicians' practice patterns that result in more--or more costly--services being provided to non-Medicare patients. In other words, Medicare could achieve savings at the expense of other third-party payers and individual consumers with less market power.

Unlike the United States, some other industrial countries have relied extensively on controls on expenditure levels, including national or area expenditure targets, annual global budgets for hospitals, and expenditure targets for physician services. Five of the Canadian provinces have established expenditure targets for physicians' services which, if exceeded, lead to lower fees in the next round of fee negotiations. Quebec caps physicians' incomes for each quarter; if the income limit is exceeded, payments are greatly reduced during the rest of the quarter.

Operating costs for hospitals in Canada are reimbursed with global annual budgets which are negotiated between the provinces and individual hospitals. These global budgets vary with the number of hospital beds per capita, the ratio of hospital staff to patients, and the amount and types of services provided. Hospital administrators then allocate these funds at their discretion. However, these global budgets have not always been applied as intended, because cost overruns have often been paid by the provinces.

The Canadian federal government has also capped its contribution to national health spending. Until 1977, the federal government matched provincial spending dollar for dollar. Since 1977, the federal government has limited the growth in its contribution to health care costs by using a formula based on growth in the gross national product. Per capita payments are made to the provinces, regardless of the individual province's health care expenditures. This formula has forced the provinces to bear an increasing share of health care costs, since health expenditures have generally grown faster than gross national product.

Former West Germany's Health Care Cost Containment Act of 1977 established an annual assembly of health care providers, statutory and commercial insurance carriers, labor unions, employers, and state and local governments, which sets ceilings on the growth rates in national health care spending by type of service. A unique feature of the system is a negotiated expenditure cap that has been applied to spending for ambulatory physician services since 1985. If expenditures rise faster than expected, the fees for physician services are

reduced to prevent total spending from exceeding the cap. Such global budgeting is not applied to hospital reimbursement.

Expenditures for hospital services in Britain's National Health Service are fixed by the national government within the framework of the entire government budget. Annual funding is allocated to the regions based on a formula that accounts for population size and the region's mortality rate. If a region overspends its allocation, less money is provided the next year. Generally, a hospital receives the same budget as the previous year, increased by an inflation factor, although individual hospitals can lobby for increased funding. France also instituted global budgeting for hospitals in 1983. Before that, the government reimbursed hospitals with pre-set per diem rates.

Global budgeting for hospitals' operating costs and expenditure caps for overall spending or specific types of spending will limit the level and rate of growth of health care spending, if they are strictly applied. If a specified amount of money is allocated, and no other source of funding is available, then the health care system is constrained to cost only that amount. Setting the budget or cap, however, requires careful planning in order to avoid detrimental effects on quality and access to care.

Expenditure targets for physicians' services may also be an effective mechanism for controlling health care costs, particularly if the system responds rapidly when it appears those targets will be exceeded. Immediate reductions in fees, when volume rises, to bring total spending down to the target is one effective approach. Similarly, a target associated with a substantial reduction in fees in future periods, or income limits tied to annual per physician targets, may be effective. In general, though, expenditure targets are applied less rigidly than expenditure caps, and, therefore, produce less definite outcomes. Some countries also combine expenditure targets with ongoing monitoring of individual physician practice patterns, in order to reduce the potential for some physicians to increase their incomes at the expense of other physicians under the target.

CHAPTER IV

THE POTENTIAL FOR CONTROLLING RISING HEALTH CARE COSTS IN THE UNITED STATES

Control of health care costs--through either a one-time drop in spending or a lower rate of increase--is much more difficult to achieve in the United States than it is in countries that have chosen to develop a coordinated health care policy nationwide or have implemented a national health system. In the United States, attempts to control health spending in one segment of the market or for specific groups of consumers may be successful for the segment of the market affected. The impact on overall health spending may be much less, however, since providers and insurers may compensate for lower revenues from one segment of the market by increasing prices for, or the quantity of services provided to, other groups.

During the 1980s, a number of strategies to control health care costs were implemented. Managed care and utilization review requirements spread rapidly to encompass a substantial portion of the population. Price controls were imposed on physicians under the Medicare program for an extended period. A new hospital payment system was imposed under the Medicare program that created incentives for greater efficiency in the provision of hospital services. Competition among providers and insurers increased. Although it is difficult to quantify the overall effects of each change separately, it appears that these efforts to contain costs have had little impact on total spending. The average annual rate of increase in real health spending per person was 4.3 percent between 1980 and 1985 and 4.6 percent between 1985 and 1989. And the share of GDP devoted to health spending rose from 9.2 percent in 1980 to 11.7 percent in 1989.

Evidence from other countries, and from research, suggests that it may be possible to achieve greater control over health care spending in the United States than has been achieved in the past decade. It would be necessary, however, to make changes in the financing and delivery of health care. Several policies used in combination could substan-

tially increase our ability to control health care spending. These policies include: elimination of first-dollar coverage under insurance policies; uniform utilization monitoring and review applied to all physicians rather than to individual patients and specific procedures; uniform payment levels for services that apply to all payers (including a prohibition on additional billing by providers); health planning that establishes capital and technology targets relative to population at national and regional levels and that does not reimburse for services provided through unapproved purchases; and effective national and regional budgets for overall spending or expenditure targets for specific types of spending.

In the absence of these significant changes in the structure of the health care system, it is unlikely that the United States will be able to achieve much greater control over health care spending than was evident in the 1980s. The consequences of failure to obtain the benefits from effective cost containment are many. Health care spending will grow as a share of national income. Workers will receive a greater share of compensation as health insurance coverage, and less in the form of direct wages and salaries. As health care costs continue to rise at a rate that exceeds the rate of increase in wages and salaries, fewer workers--particularly lower-wage workers--will have employment-based group insurance. Governments, both federal and state, will spend a larger amount in order to maintain current health programs, exerting pressure on government budgets and potentially crowding out funds for other programs in the absence of higher taxation. Finally, not controlling health care spending will make it more difficult to address the other major failure of the health care system--the large and growing number of people in the United States without health insurance coverage.

In the process of changing the present health care system to achieve greater control over costs, however, some of the desirable features of the current health care system would be adversely affected. In particular, such a restructuring of the present system would probably mean less spending on research and development, longer waiting times for access to new technologies, and limitations on our existing choices of providers, health insurance coverage, and treatment alternatives. Whether these trade-offs are desirable depends upon the priority the

nation places on controlling costs as against maintaining other characteristics of the health care system.

APPENDIXES

APPENDIX A

COMPOSITION OF NATIONAL HEALTH EXPENDITURES AND TRENDS IN SPENDING BY PAYER AND TYPE OF SERVICE

National health expenditures in the United States are defined as total spending on all health care activities during the year. They include expenditures for hospital care; physician, dental, and other professional services; home health care; drugs and other nondurable products; vision products and other durable medical products; nursing home and other personal care; administrative costs; health services research; and construction or renovation of hospitals and nursing homes. Spending for health services and supplies is, therefore, total national health expenditures minus spending for research and construction. Personal health spending consists of health services and supplies minus administrative costs, research, and construction; it measures the services provided directly to consumers of health care. In 1989, national health expenditures were $604.1 billion, health services and supplies totaled $583.5 billion, and personal health care spending was $530.7 billion.

After adjusting for inflation by expressing each year's spending in 1989 dollars, national health expenditures rose from $134.4 billion in 1965 to $604.1 billion in 1989 (see Table A-1). This increase represented an average annual real growth rate of 6.5 percent.

The distribution of personal health expenditures by type of service has not changed much since 1965 (see Table A-2). The largest share of spending has consistently been for hospital services, which represented 34 percent of total spending in 1965 and 39 percent in 1989. This was followed by spending for other services, physician services, nursing home care, and prescription drugs. The only shift in the rank order of service categories has been between nursing home spending and expenditures for prescription drugs.

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TABLE A-1. REAL NATIONAL HEALTH EXPENDITURES BY PAYER AND TYPE OF SERVICE, SELECTED YEARS 1965-1989 (In billions of 1989 dollars)

Type of Service	1965	1970	1975	1980	1985	1989
All Payers						
Hospitals	45.3	76.6	109.8	154.0	194.4	232.8
Physicians	26.5	37.3	48.8	63.0	85.6	117.6
Nursing Homes	5.5	13.4	20.8	30.1	39.5	47.9
Drugs and Other Nondurables	19.0	24.2	27.3	30.3	37.3	44.6
Other	38.1	52.6	71.9	97.3	129.4	161.2
Total	134.4	204.1	278.6	374.6	486.1	604.1
Federal Government						
Hospitals	7.0	26.9	41.6	62.2	82.8	92.9
Physicians	0.4	5.9	9.8	14.5	22.2	31.8
Nursing Homes	0.7	3.8	6.4	9.2	11.3	16.2
Drugs and Other Nondurables	0.2	0.7	1.1	1.2	1.7	2.5
Other	7.3	11.5	17.5	21.1	25.0	31.1
Total	15.6	48.7	76.3	108.3	143.0	174.4
State and Local Governments						
Hospitals	10.1	14.0	18.2	19.9	23.1	31.6
Physicians	1.4	2.3	3.8	4.5	5.7	7.4
Nursing Homes	0.9	2.5	4.5	6.6	7.9	9.0
Drugs and Other Nondurables	0.3	0.7	1.0	1.3	1.8	2.8
Other	5.0	7.8	11.7	17.7	21.1	28.0
Total	17.7	27.2	39.2	49.9	59.6	78.8

(Continued)

SOURCE: Congressional Budget Office, from the Health Care Financing Administration.

TABLE A-1. Continued

Type of Service	1965	1970	1975	1980	1985	1989
Private Health Insurance						
Hospitals	18.5	26.4	37.8	56.3	68.8	84.2
Physicians	8.6	13.1	19.2	27.0	39.0	56.1
Nursing Homes	a	a	0.2	0.3	0.4	0.5
Drugs and Other Nondurables	0.4	0.9	1.8	3.8	6.0	7.0
Other	4.8	5.5	10.1	23.0	40.9	52.0
Total	32.3	45.9	69.0	110.4	155.1	199.7
Consumer Out-of-Pocket Spending						
Hospitals	8.9	6.9	9.2	8.0	10.2	12.7
Physicians	16.0	15.9	16.0	16.9	18.6	22.4
Nursing Homes	3.5	6.4	8.8	13.0	19.2	21.3
Drugs and Other Nondurables	18.2	21.9	23.4	24.0	27.8	32.3
Other	14.7	19.1	23.4	25.9	30.2	36.2
Total	61.4	70.3	80.8	87.9	106.1	124.8
Other Private Payers						
Hospitals	0.9	2.5	3.0	7.5	9.5	11.4
Physicians	a	a	a	a	a	a
Nursing Homes	0.3	0.7	1.0	0.9	0.8	0.9
Drugs and Other Nondurables	0	0	0	0	0	0
Other	6.2	8.8	9.2	9.6	12.1	14.0
Total	7.4	11.9	13.3	18.1	22.4	26.3

a. Less than $100 million.

In contrast, the distribution of national health expenditures by payer has changed considerably over time (see Table A-3). In 1960, out-of-pocket payments by consumers represented almost half of all spending for health care. Private health insurance contributed slightly less than one-quarter of the total, and spending by federal and by state and local governments contributed one-quarter. The picture was much different in 1989. Private health insurance represented the largest share, 33 percent. This was followed by federal spending (29 percent), out-of-pocket payments (21 percent), state and local government spending (13 percent), and other private payments (4 percent).

The increase in health spending can be decomposed into the contributions of general economywide inflation, health services prices, population growth, and the volume and complexity of services, where complexity includes technological advances as well as the mix of services provided. These factors have had differential effects on health spending over time. Increases in volume and complexity accounted for the largest share of growth in health spending during the 1960s, explaining about half of the growth, but their relative importance has

TABLE A-2. SHARE OF PERSONAL HEALTH EXPENDITURES BY TYPE OF SERVICE, SELECTED YEARS 1965-1989 (In percent)

Type of Service	1965	1970	1975	1980	1985	1989
Hospitals	33.7	37.6	39.4	41.1	40.0	38.5
Physicians	19.7	18.3	17.5	16.8	17.6	19.5
Nursing Homes	4.1	6.5	7.5	8.0	8.1	7.9
Drugs and Other Nondurables	14.2	11.8	9.8	8.1	7.7	7.4
Other [a]	28.3	25.8	25.8	26.0	26.6	26.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

SOURCE: Congressional Budget Office tabulations based on data from the Health Care Financing Administration.

a. Includes home health care, dental and other professional services, durable medical equipment, nondurable products except drugs, other personal health care, administration, and research.

TABLE A-3. SHARE OF NATIONAL HEALTH EXPENDITURES BY PAYER, SELECTED YEARS 1960-1989 (In percent)

Payer	1960	1970	1980	1989
Federal	11	24	29	29
State/Local	14	13	13	13
Out-of-Pocket Payments	49	34	23	21
Private Health Insurance	22	22	29	33
Other Private Sources	5	6	5	4
Total	100	100	100	100

SOURCE: Congressional Budget Office tabulations based on data from the Health Care Financing Administration.

declined over time. Since the mid-1970s, general inflation has explained most of the rise in health care spending. Volume and complexity increases were the second most important factor until the early 1980s. Since the early 1980s, the contributions of volume and complexity of health care services and of health services prices have been comparable. For example, between 1988 and 1989, the contributions to the growth in health care spending were: 42 percent from general inflation, 32 percent from volume and complexity increases, 17 percent from increases in health services prices, and 9 percent from population growth.

APPENDIX B

REASONS FOR LACK OF HEALTH INSURANCE

In March of 1990, an estimated 33.4 million people, or 13.6 percent of the population, were without health insurance coverage (Table B-1). People age 65 or more are the least likely to lack insurance, with only 1 percent of them uninsured. Because all people 65 or over are eligible for insurance under Medicare, this group is excluded from subsequent tables and discussion.

This appendix examines the reasons for lack of insurance among the population under 65. The number of uninsured among this population was 33.1 million in 1990, or 15.3 percent of the total. Young adults age 18 to 24 are the group most likely to lack insurance; 25.1 percent of this age group were without insurance in 1990, nearly twice the incidence nationwide.

The appendix relies throughout on estimates of insurance coverage at a single point in time, but it should be remembered that this may understate the problem of inadequate coverage. Estimates for 1987 indicate that the number who were uninsured at some time during the year was 30 percent higher than the number who were uninsured during the first quarter. If the same was true for 1990, then about 20 percent of the population under 65 were uninsured at some time during the year, and about 10 percent were uninsured for the whole year.[1] Further, the proportion of the population without insurance has been growing. It is currently nearly 30 percent higher than it was in the late 1970s.[2]

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1. P. Short, *Estimates of the Uninsured Population, Calendar Year 1987*, DHHS Publication No. (PHS) 90-3469, National Medical Expenditure Survey Data Summary 2 (September 1990), Agency for Health Care Policy and Research, Public Health Service.

2. Trends in rates for the uninsured were calculated from Health Interview Survey (HIS) data for selected years because insurance coverage is not accurately reported in the annual Current Population Surveys prior to 1988. According to HIS data, 12.2 percent of the population under 65 was uninsured in 1978, compared with 15.7 percent in 1989.

TABLE B-1. HEALTH INSURANCE COVERAGE BY AGE, 1990 (In millions)

Group	Total Population	Insured		Uninsured		
		Number	Number as Percentage of People in Group	Number	Number as Percentage of: People in Group	Number as Percentage of: Total Uninsured
Total Population	246.2	212.8	86.4	33.4	13.6	100.0
65 or over	29.6	29.3	99.0	0.3	1.0	0.9
Under 65	216.6	183.5	84.7	33.1	15.3	99.1
Under 65 by Age of Individual						
Under 18	64.3	55.8	86.7	8.5	13.3	25.6
18 to 24	25.3	19.0	74.9	6.4	25.1	19.0
25 to 44	80.4	67.9	84.4	12.6	15.6	37.6
45 to 64	46.5	40.9	88.0	5.6	12.0	16.8

SOURCE: Congressional Budget Office, from the March 1990 Current Population Survey.

Insurance among the population under 65 in the United States is largely employment-based, accounting for 69.5 percent of coverage for this group (Table B-2). About 8.5 percent of the population under 65 benefits from public insurance programs (Medicaid, Medicare, and veterans health benefits), while 6.7 percent of this group has some private coverage that is not employment-based.

There are two fundamental reasons for lack of private insurance coverage: either coverage is not available at any price, or the offer price is higher than the uninsured person is willing and able to pay. The latter appears to be a more important factor than the former, especially for those with some work force connection.

THOSE WITH NO WORK FORCE CONNECTION

Nearly one-fifth (or 19.4 percent) of the uninsured population have no connection with the work force, either through their own employment

or that of a relative (Table B-3). Among those with no work force connection, 21.6 percent are uninsured. Unless eligible for Medicare, Medicaid, or a retiree health plan, members of this group must either purchase private coverage as individuals or do without. Some choose to do without because the coverage offered to them is unattractive. Insurance policies offered to individual applicants are typically more restrictive and more expensive than employment-based group coverage, as a result of insurers' attempts to guard against high-risk applicants.

Most insurers will "underwrite" the individual applicant. This means they use various sources of information (perhaps including a medical examination) to assess the individual's health, financial status, and other risk factors. On the basis of this assessment, the individual is classified as either a standard risk, a substandard risk, or uninsurable. A person found to be a standard risk will generally be able to purchase insurance without special limitations for the standard premium. For any given benefit package, however, the standard premium for an individual policy will be higher than it would be under a group policy because of higher administrative costs. A person found

TABLE B-2. SOURCES OF HEALTH INSURANCE COVERAGE FOR THE POPULATION UNDER 65, 1990 (In millions)

Source of Primary Coverage	Number	Number as Percentage of Population Under 65
Employment-based	150.6	69.5
Medicare	3.0	1.4
Medicaid	14.6	6.7
Veterans	0.8	0.4
Other Private	14.6	6.7
Insured Total	183.5	84.7
Uninsured Population	33.1	15.3

SOURCE: Congressional Budget Office, from the March 1990 Current Population Survey.

to be an insurable but substandard risk will typically face an even higher, above-standard premium. Further, there may be either a temporary or permanent exclusion waiver attached to the policy, which means that the insurer will not pay for services provided to treat specified medical conditions.

Some individuals are denied insurance coverage altogether. For example, insurers often deny coverage to people with AIDS, alcoholism, diabetes, coronary artery disease, or cancer. Even in the absence of some preexisting medical condition, coverage may be denied to

TABLE B-3. WORK FORCE CONNECTIONS OF THE UNINSURED POPULATION UNDER 65, 1990 (In millions)

Group	Number	Number as Percentage of Uninsured Under 65	Percentage of People in Group Who Are: Uninsured	Insured
Workers				
Full-time	13.4	40.4	12.6	87.4
Part-time	2.7	8.2	34.2	65.8
Subtotal	16.1	48.7	14.2	85.8
Nonworking Dependents of Workers				
Full-time	9.0	27.2	13.3	86.7
Part-time	1.6	4.7	28.7	71.3
Subtotal	10.6	31.9	14.4	85.6
No Connection to Labor Market	6.4	19.4	21.6	78.4
Total	33.1	100.0	15.3	84.7

SOURCE: Congressional Budget Office, from the March 1990 Current Population Survey.

NOTES: Workers are all those reporting that they were employed during the survey week, including those not at work.

The allocation among workers, dependents of workers, and those with no connection to the work force is based on the status of the individual. However, for those with a work force connection, the connection is classified as full time if anyone in the family works full time.

people in high-risk categories, such as drug abusers, older people, and those in high-risk occupations. Other factors, such as financial status, the area in which a person lives, and sexual preference may also influence an insurer's decision to deny coverage.[3]

Not all insurers use underwriting for all applicants in the individual market. A third of Blue Cross/Blue Shield plans--serving 11 states and the District of Columbia--offer open enrollment at some time during the year, which means that they will cover anyone who applies regardless of health status and without medical screening.[4] However, these plans often provide fewer benefits, impose higher cost-sharing requirements, and charge higher premiums to those who apply during the open enrollment period. Further, they usually impose waiting periods before benefits will be paid for preexisting conditions, or they may exclude coverage for such conditions altogether. Federally qualified health maintenance organizations (HMOs) may deny coverage altogether to a high-risk applicant, but they are required to charge a uniform rate (by class) to any individual applicant they accept. Further, they are not permitted to impose exclusion waivers or waiting periods for coverage. Some states have similar requirements governing HMOs that are not federally qualified.

THOSE WITH A WORK FORCE CONNECTION

About 80.6 percent of the (under 65) uninsured population is composed of those who have some connection to the work force (Table B-3). An estimated 48.7 percent of the uninsured population are employed, and another 31.9 percent are dependents of workers. About half of this group of uninsured are connected to the work force through a small employer (defined here as fewer than 25 employees), while the other half is connected through a larger employer.[5]

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3. U.S. Congress, Office of Technology Assessment, *Medical Testing and Health Insurance* (August 1988).

4. Congressional Research Service, *Health Insurance and the Uninsured: Background Data and Analysis* (May 1988), p. 29.

5. The Bureau of Labor Statistics defines any employer with fewer than 100 employees as a small employer. A different definition is used here in order to focus on the firm size differences that correlate with differences in their provision of insurance.

TABLE B-4. AVAILABILITY OF EMPLOYMENT-BASED INSURANCE PLANS, BY SIZE OF FIRM, 1989

Size of Firm (By number of employees)	Percentage of Firms Offering	Percentage of Employees in Firms Offering
Under 25	39	55
Under 10	33	42
10 to 24	72	70
25 to 99	94	94
100 to 499	99	97
500 to 999	100	100
1,000 and Over	100	100
All Firms	43	77

SOURCE: Congressional Budget Office, from 1989 Employer Survey by Health Insurance Association of America.

Nonworking dependents are only slightly more likely to be uninsured than are workers (14.4 percent versus 14.2 percent), even though firms often require workers to contribute a larger share toward the premium for their dependents than for themselves. In one employer survey for 1989, the average employee share for individual coverage was 14 percent, while it was 26 percent for family coverage. About 57 percent of employees contributed nothing toward the premium for individual coverage, compared with 36 percent for family coverage.[6]

Among employees, those in families with only part-time workers are more likely to be uninsured than those in families with at least one member who works full time (34.2 percent versus 12.6 percent). Most firms do not provide health insurance coverage for part-time employees even when they offer coverage to full-time employees, and many

6. Health Insurance Association of America, *Providing Employee Health Benefits: How Firms Differ* (1990), p. 59.

TABLE B-5. SOURCES OF HEALTH INSURANCE FOR WORKERS UNDER 65, BY SIZE OF FIRM, 1990

Size of Firm (By number of employees)	Number of Workers (In millions)	Percentage Insured by Primary Source				
		Own Employer	Other Employer	Public	Other Private	All Sources
Under 25	32.9	30.7	24.6	2.5	17.2	75.0
25 to 99	14.9	58.2	17.3	2.1	6.3	83.8
100 to 499	16.0	67.7	14.6	1.9	4.4	88.7
500 to 999	6.5	71.7	14.7	1.3	4.6	92.3
1,000 and Over	43.5	73.9	12.9	1.6	4.2	92.7
All Firms	113.7	58.4	17.2	2.0	8.3	85.8

SOURCE: Congressional Budget Office, from the March 1990 Current Population Survey.

smaller firms do not provide health insurance to their employees at all.[7]

Overall, about 43 percent of firms--employing 77 percent of all workers--provide insurance coverage to their employees, at least to those who work full time (Table B-4). Virtually all firms with 100 or more employees offer insurance, and 94 percent of firms with 25 to 99 employees do so. By contrast, only 39 percent of firms with fewer than 25 employees offer insurance. Among small firms, insurance is less likely to be offered the smaller the firm. Only a third of firms with fewer than 10 employees provide insurance, while 72 percent of firms with 10 to 24 employees do so.

Among all workers, 85.8 percent are insured (Table B-5). About 58.4 percent of workers are insured by their own employers, and another 17.2 percent are insured by a relative's employer. The larger the size of the worker's firm, the more likely it is that the worker has

7. In results from a number of employer surveys conducted in the late 1980s, the proportion of firms that did not offer coverage to part-time employees ranged from 68 percent to 80 percent. Congressional Research Service, *Insuring the Uninsured: Options and Analysis* (October 1988) p. 113.

TABLE B-6. UNINSURED WORKERS UNDER 65, BY SIZE OF FIRM, 1990

Size of Firm (By number of of employees)	Number (In millions)	Number as Percentage of Total Uninsured Workers	Percentage of People in Group Who Are Uninsured
Under 25	8.2	51.1	25.0
25 to 99	2.4	14.9	16.2
100 to 499	1.8	11.2	11.3
500 to 999	0.5	3.1	7.7
1,000 and Over	3.2	19.7	7.3
All Firms	16.1	100.0	14.2

SOURCE: Congressional Budget Office, from the March 1990 Current Population Survey.

insurance and that the insurance is provided by the worker's employer.[8]

About 14.2 percent of all workers--or one-third of workers who do not obtain coverage from their own employers--are uninsured. The other two-thirds of workers who do not obtain coverage from their own employers have coverage from some other source. The other sources include (in order of importance) employment-based coverage obtained through a relative, private coverage that is not employment-based, and coverage through a public program.

Workers in Larger Firms

Nearly half of uninsured workers are in firms with 25 or more employees, and a third are in firms with 100 or more employees--firms that usually offer insurance coverage to their employees (Table B-6). A number of factors explain the existence of uninsured workers in these

8. The pattern of insurance for dependents is similar to that shown for workers.

TABLE B-7. WORKER RESPONSES TO HEALTH INSURANCE OFFERS BY FIRMS, 1988 (In percent)

Response	As Percentage of All Workers
Insurance Offered to Worker and:	
Worker accepted	65.8
Worker refused and was:	
Covered by spouse's firm	4.6
Not covered by spouse's firm	5.5
Insurance Not Offered to Worker Because:	
Worker was ineligible	5.8
Firm did not provide	18.3

SOURCE: Congressional Budget Office, from May 1988 Current Population Survey.

larger firms. First, part-time workers (who make up about 20 percent of the work force) are often not offered employment-based coverage. Second, some new employees are temporarily ineligible at any given time because of waiting periods imposed by employers. Third, an estimated 13 percent of workers eligible for employment-based coverage (or 10 percent of all workers) refuse it, and fewer than half of these have employment-based coverage through a spouse (Table B-7).

Workers in Small Firms

Slightly more than half of uninsured workers are in firms with fewer than 25 employees--firms that are relatively unlikely to offer group coverage.[9] These firms experience a number of problems in the insurance market that distinguish them from larger employers. In fact, many of the problems faced by small employers are similar to those faced by individuals seeking insurance.

9. The small group market is usually defined as the market applicable to firms with fewer than 25 employees because this is the smallest category identified in the March Current Population Survey. The appropriate firm size to define the small employer's insurance problem is debatable, however. It is most common to use medical underwriting for groups of under 15, but there is evidence that insurers are beginning to underwrite groups with as many as 99 workers. See Richard Donahue, "Group Underwriters Seek Profit," *National Underwriter* (November 28, 1988), p. 3.

TABLE B-8. PERCENTAGE OF FIRMS CITING PARTICULAR REASONS FOR NOT OFFERING HEALTH INSURANCE, 1989

Reason	Important	Not Important
Expense	86	14
Low or Unstable Profits	76	24
Future Cost	70	30
Low Employee Interest	52	48
No Acceptable Plan	46	54
Not Needed to Attract Employees	42	58
High Turnover	32	68

SOURCE: Congressional Budget Office, from 1989 Employer Survey by Health Insurance Association of America.

In a 1989 survey of employers by the Health Insurance Association of America, cost was the reason most frequently mentioned by employers who did not offer health insurance (Table B-8). About 86 percent of employers cited premium expense, while 76 percent reported that their profits were either too low or too unstable to support health insurance benefits (more than one reason could be cited). Less than half the employers surveyed reported that they were unable to find an acceptable plan (this includes those who were offered coverage but at a higher price than they were willing to pay).[10]

The availability of insurance does not appear to be the major problem for small employers. In a 1987 survey of small employers, fewer than 20 percent cited unavailability as the reason they did not provide health insurance. In fact, two-thirds of employers who did not provide insurance had never sought it.[11] In later surveys conducted

10. Health Insurance Association of America, *Providing Employee Health Benefits: How Firms Differ* (1990), p. 32.

11. Small Business Administration, *Health Care Coverage and Costs in Small and Large Firms* (April 1987).

TABLE B-9. WAGE DISTRIBUTION FOR FIRMS, BY SIZE OF FIRM AND WHETHER IT OFFERS HEALTH BENEFITS, 1989

Size of Firm (By number of employees)	All Firms			Firms With Health Benefits			Firms Without Health Benefits		
	Percentage of Employees Earning			Percentage of Employees Earning			Percentage of Employees Earning		
	Under $10,000	$10,000-$30,000	Over $30,000	Under $10,000	$10,000-$30,000	Over $30,000	Under $10,000	$10,000-$30,000	Over $30,000
Under 10	24	55	21	11	60	28	30	53	18
10 to 24	24	56	19	16	62	22	47	41	12
25 to 99	13	67	19	11	69	20	a	a	a
100 and Over	14	65	22	13	65	22	a	a	a
All Firms	23	56	21	12	62	26	31	52	17

SOURCE: Congressional Budget Office, from 1989 Employer Survey by Health Insurance Association of America.

a. Numbers in these categories are too small to yield reliable estimates.

in selected cities, the proportion of firms citing unavailability ranged from 10 percent to 36 percent.[12]

Even if the costs of insurance were the same for small firms and large ones, small firms would be more likely to find coverage too expensive because they are more likely to be relatively low-wage enterprises. In 1989, less than 14 percent of employees earned less than $10,000 annually in firms with 25 or more employees, compared with 24 percent in smaller firms (Table B-9). In firms that offered health benefits, about 12 percent of employees earned less than $10,000 a year. In firms that did not offer health benefits, 31 percent of employees earned less than $10,000.

In fact, however, the costs of any given kind of coverage are typically higher for small firms than for larger ones. This result occurs because of higher administrative costs, and because of less favorable treatment under tax law.

12. Alpha Center, "Summary of Surveys of Small Employers Conducted by Health Care for the Uninsured Program Projects" (1990).

By one estimate, administrative expenses are 40 percent of benefit costs for firms with fewer than 5 employees, compared with 16 percent for firms with 100 to 499 employees and 5.5 percent for firms employing 10,000 people or more (Table B-10). One reason administrative costs per person covered are so much higher for small firms is that some of those costs are relatively fixed, regardless of the number of people covered under the policy. This is true for most general administrative expenses, such as advertising, billing, and general operating overhead. It may be true for sales commissions as well, depending on how the commission is determined. In addition, often the insurer must perform some services (such as member communications) for small groups that large employers would undertake themselves. The costs of medical underwriting are typically only relevant for small employers. And insurers commonly retain a higher proportion of small group premiums as reserves, reflecting the greater unpredictability of benefit costs for small groups.

TABLE B-10. BREAKDOWN OF ADMINISTRATIVE EXPENSES FOR CONVENTIONALLY INSURED PLANS, 1988
(As a percentage of benefit cost)

Employees	General Administration	Sales Commission	Claims Administration	Risk and Profit	Premium Taxes	Interest Credit	Total
1 to 4	12.5	8.4	9.3	8.5	2.8	-1.5	40.0
5 to 9	11.2	6.0	8.6	8.0	2.7	-1.5	35.0
10 to 19	9.2	5.0	7.2	7.5	2.6	-1.5	30.0
20 to 49	7.6	3.3	6.3	6.8	2.5	-1.5	25.0
50 to 99	4.8	2.0	4.3	6.0	2.4	-1.5	18.0
100 to 499	4.0	1.6	4.1	5.5	2.3	-1.5	16.0
500 to 2,499	3.2	0.7	3.9	3.5	2.2	-1.5	12.0
2,500 to 9,999	1.4	0.3	3.8	1.8	2.2	-1.5	8.0
10,000 or More	0.7	0.1	3.0	1.1	2.1	-1.5	5.5

SOURCE: Estimates by Hay-Huggins Company based on underwriting practices of major insurers. Reprinted from U.S. House of Representatives, Committee on Ways and Means, Subcommittee on Health, *Private Health Insurance: Options for Reform* (September 20, 1990), p. 12.

Another factor behind the higher costs of health insurance for small employers is the less generous tax treatment afforded unincorporated firms. Corporations can deduct 100 percent of premium costs as a business expense when calculating taxable income, not only for employees but also for owners and their dependents. By contrast, while self-employed individuals, partnerships, and owners of other unincorporated firms may deduct 100 percent of premium costs for unrelated employees, they may deduct only 25 percent of premium costs for themselves and their dependents. Further, this deduction is scheduled to expire at the end of 1991.

Not only are the costs of any given coverage higher for small firms, but the quality of the coverage offered is typically lower.[13] Most insurers now subject small employers to underwriting, requiring medical information about each employee. If some employees are determined by the insurer to be high risk, the insurer may deny coverage to the whole group; offer to cover the group only if the high-risk employees are excluded; or offer to cover the entire group at higher rates.[14] Further, insurers typically impose a waiting period (varying from 6 months to 2 years) before coverage begins for preexisting conditions among the insured group.

Another undesirable feature of the coverage offered to small employers is that insurers may not guarantee continuation of coverage beyond the initial contract period. While most insurers cancel groups only with cause (such as misrepresentation), some insurers may deny renewal to eliminate groups with poor experience or groups for which the waiver on coverage for preexisting conditions is about to expire. When coverage is continued in the latter case, premiums are likely to increase sharply, often inducing employers to switch to a new insurer who offers lower rates but imposes a new waiting period on preexisting conditions. As a result, the exclusion for preexisting conditions is

13. United States House of Representatives, Committee on Ways and Means, Subcommittee on Health, *Private Health Insurance: Options for Reform* (September 20, 1990), pp. 7-9.

14. The Americans with Disabilities Act of 1990 (P.L. 101-336) will, when fully effective in 1992, prohibit employers with 15 or more workers from excluding any employee from a health plan. The plan may still exclude coverage for preexisting conditions or contain other provisions based on standard underwriting or risk classification practices.

effectively permanent for employees in firms who change insurers frequently in search of lower premiums.

Finally, insurers may require minimum participation rates for small employers to guard against the possibility that only those employees who foresee a need for expensive health care will enroll. For very small employers, insurers may require 75 percent to 100 percent participation. To achieve these participation rates, employers must typically pay most of the premium costs, and insurers may require that very small employers pay the entire premium rather than requiring an employee contribution.

Although cost is the primary reason why small employers choose not to provide health insurance, results from surveys in selected cities suggest that there is a core of small employers who would never buy insurance in a voluntary system--probably because they can hire a suitable work force without it. In Denver, one-third of small employers not already providing insurance were unwilling to pay anything for it. In Birmingham, Alabama, one-fourth of those surveyed would contribute nothing toward insurance.[15]

15. United States House of Representatives, Committee on Ways and Means, Subcommittee on Health, *Private Health Insurance: Options for Reform* (September 20, 1990), p. 42.

APPENDIX C

OVERVIEW OF HEALTH SERVICES IN OTHER COUNTRIES

This appendix provides an overview of the health care systems in four other countries--the former West Germany, Canada, Great Britain, and France--and describes several strategies that have been used by these countries to contain health care costs.

OVERVIEW OF HEALTH CARE SYSTEMS IN OTHER COUNTRIES

All four countries examined here have health care systems that cover all, or almost all, of their population either through the public sector or through private insurance funds that are centrally regulated.

In the former West Germany, over 99.7 percent of the population has health insurance that covers hospital care, physician and dental services, prescription drugs, and medical equipment. Long-term care is not covered by health insurance, although local welfare expenditures are used to subsidize those who cannot afford such care. About 90 percent of the population is covered by the "Statutory Health Insurance" system, which consists of 1,200 nonprofit, privately run sickness funds that are regulated by the central government. About 8.7 percent of the population is covered by commercial insurance policies, and about 1 percent is covered by governmental programs. About 0.3 percent is uninsured.

Those with incomes below a specified level, students, and the majority of those who are retired must belong to the Statutory Health Insurance system. All others can elect to join a sickness fund, obtain commercial insurance, or remain uninsured. When workers join sickness funds, their dependents are also covered. About three-quarters of the membership in the sickness funds is compulsory. Membership in a sickness fund is generally determined by geography, the worker's

craft, or the worker's place of employment. Most workers do not have a choice among sickness funds, and remain in the same one for life. The exception is that white-collar workers can also choose a nationwide fund.

Canada's health insurance system has provided universal coverage since 1972. Each province administers its own health plan under federal regulations specifying minimum standards and federal financial contributions. The plans must provide coverage for physician services and inpatient and outpatient hospital services. Notably absent from required coverage are prescription drugs and long-term care. Most Canadian provinces do provide prescription drug coverage at least for the elderly and those on public assistance. Some provinces also provide long-term care coverage. A private insurance industry exists in Canada, but benefits can only be provided for services not covered by the provincial plans.

Unlike Canada and the former West Germany, the government in Britain both operates the health care system and funds it. Britain's National Health Service (NHS) provides universal coverage for physician and hospital services, long-term care, and prescription drugs. A private insurance system operates alongside the NHS. Individuals purchase private insurance primarily for elective surgery and nursing home care, two services to which access is restricted under the NHS.

France's public health care system provides nearly universal coverage, covering 100 percent of the population for hospital care and 99 percent of the population for physician services and prescription drugs. Like the former West German system, the French national health system is composed of sickness funds that cover both the worker and dependents and are regulated by the central government. It differs from the German system in that more than 80 percent of the French population belong to the general fund, which is a network of over 100 local sickness funds operated under the authority of the central government. France is attempting to expand membership of the general fund so that eventually the entire health care system will be under the control of the national government. Private insurance exists in France but plays a relatively minor role, funding only about 6 percent of health care expenditures. Some employers and some unions purchase

private insurance that is financed by a compulsory payroll deduction. The purchase of private insurance by individuals is uncommon.

The tax structures used to finance these health care systems also vary among countries. The sickness funds in former West Germany are entitled to levy payroll taxes that vary with the employee's income but not with family size or health status. Employers and employees each contribute half of the total payroll tax levied. Since average health care costs per enrollee vary among the sickness funds, payroll taxes vary among the funds from about 8 percent to 16 percent. Sickness funds with financial problems sometimes receive cross-subsidies from other funds. Like the former West Germany, France finances its health care costs through compulsory payroll taxes.

The federal share of health care spending in Canada is financed by a progressive income tax. The provinces are permitted to use any taxation method that they choose to finance their portion of health care costs. Most of the provinces pay these costs primarily from general tax revenues, but Alberta and British Columbia also charge health insurance premiums.

Britain's NHS is funded mainly through general taxation, which finances 85 percent of the total NHS spending. Payroll taxes fund about 12 percent of the NHS, and patients pay about 3 percent of NHS costs.

Despite the greater regulation of the health care sector in other countries, most allow patients some degree of choice of health care providers. In Canada, patients may choose freely from among general practitioners, but need a referral to see a specialist in some provinces.

Access to health care providers is more restricted in the former West Germany and Great Britain. In former West Germany, patients may freely choose from among ambulatory physicians, but these physicians do not treat their patients once they have been admitted to a hospital. Only hospital-based physicians, who are salaried employees of the hospital, can treat inpatients. In Great Britain, choice among providers is even more restricted. Each British citizen registers

with a general practitioner (GP) who has an opening, and the GP serves as the initial contact point with the health care system. GPs can then refer patients to specialists, if needed, and the specialists can order complex tests and determine if patients require hospitalization. Once admitted to a hospital, patients are treated by specialists.

APPROACHES TO COST CONTAINMENT IN OTHER COUNTRIES

The countries examined here have used several methods to control their health care spending, some of which have not been tried in the United States. They include:

- Global budgeting, whereby targets or caps on total spending are established;
- Limitations on the supply of health care providers or medical equipment; and
- Utilization review systems, which monitor the appropriateness of medical care provided.

While cost sharing is used in the United States as a method of containing health care costs, it has had limited application in other countries.

Global Budgeting

All four of the countries discussed here have implemented some form of global budgeting. These include national expenditure targets, annual global budgets for hospitals, expenditure caps for physician services, and the incorporation of physicians' reimbursement for inpatient services into hospital payments.

Former West Germany's Health Care Cost Containment Act of 1977 established an annual assembly of health care providers, statutory and commercial insurance carriers, labor unions, employers, and

state and local governments that proposes ceilings on the growth rates in national health care spending by type of service. While these ceilings are not binding, they act as guidelines in negotiations between insurers and providers over the level of reimbursement for each medical service.

A unique feature of the West German system is a negotiated expenditure cap that has been applied to spending for physician services since 1985. If expenditures rise faster than expected, the fees for physician services are reduced to prevent total spending from exceeding the cap. Within this framework, reimbursement for ambulatory care physician services under the Statutory Health Insurance system is fee-for-service and is based on a national relative-value scale determined through negotiations between national associations of physicians and sickness funds. A conversion factor that translates the relative-value scale into monetary values is negotiated between regional associations of physicians and sickness funds. Reimbursement of physicians by commercial insurance companies is based on a separate fee schedule set by the federal government.

Such global budgeting is not applied to hospital reimbursement in former West Germany, but the hospital payments include reimbursement for inpatient physician services. Under the Statutory Health Insurance system, hospitals are reimbursed by predetermined per diem payments which do not vary according to the patient's illness or length of stay. These per diems are negotiated between each individual hospital and regional associations of sickness funds. These payments cover not only the hospital's operating costs but also payments for inpatient physician services, since physicians who treat patients on an inpatient basis are paid a salary by the hospital. Private insurance carriers also pay hospitals per diem payments, but their rates are lower than for Statutory Health Insurance patients, because they also make separate payments for inpatient physician services.

Reimbursement for physician services in Canada is similar to the West German system. Five provinces have established expenditure targets which, if exceeded, lead to lower fees in the next round of fee negotiations. For example, Quebec caps physician incomes on a quarterly basis; if the income limit is exceeded, payments are greatly

reduced during the rest of the quarter. Physicians are reimbursed on a fee-for-service basis, and the payment rates are established by a fee schedule negotiated by the provinces and physician associations.

Hospitals in Canada are paid under global annual budgets that are negotiated between the provinces and individual hospitals. These global budgets vary with the number of hospital beds per capita, the ratio of hospital staff to patients, and the amount and types of services provided. Hospital administrators then allocate these funds at their discretion. However, cost overruns have often been paid by the provinces.

The Canadian federal government has also capped its contribution to national health spending. Before 1977, the federal government matched provincial spending dollar for dollar. Since 1977, the federal government has limited the growth in its contribution to health care costs by using a formula based on growth in the gross national product. Per capita payments are made to the provinces, regardless of the individual province's health care expenditures. This formula has forced the provinces to bear an increasing share of health care costs, since health expenditures have generally grown faster than GNP.

Expenditures for hospital services in Britain's NHS are fixed by the national government within the framework of the entire government budget. Annual funding is allocated to the regions based on a formula that takes account of population size and the region's mortality rate. If a region overspends its allocation, less money is provided the next year. Generally, a hospital receives the same budget as in the previous year, increased by an inflation factor, although individual hospitals can lobby for increased funding. In addition, hospitals receive some funding from charities, endowments, and private-pay patients.

Expenditures for physician services in Britain are controlled in several ways. About half of physicians' incomes from the provision of ambulatory services come from capitated payments--they receive a fixed amount per patient enrolled in their practice. These general practitioners serve as the primary contact points for patients under the NHS. Patients who require inpatient care are referred to NHS spe-

cialists, most of whom are salaried employees of the regional health authority. Nevertheless, there is still a sizable fee-for-service component. Ambulatory physicians are paid on a fee-for-service basis for some services, such as certain preventive procedures and family planning services. Hospital-based physicians in private hospitals are also paid on a fee-for-service basis.

France instituted global hospital budgeting in 1983. Before that, the government reimbursed hospitals with preset per diem rates. Global budgeting is not applied to physician services, but spending is somewhat controlled through other means. Ambulatory care physicians are reimbursed on a fee-for-service basis, with the fees set by the government. Hospital-based physicians in public hospitals are paid a salary, but those employed by private hospitals are paid on a fee-for-service basis.

Limitations on the Supply of Services

The governments of all four countries control the capital acquisition of hospitals. Several of these countries have also attempted to limit the number of physicians, which may help to control health care costs if fewer providers translate into fewer services provided.

In Canada, hospitals' capital costs are not included in their global budgets. Rather, hospitals must make separate application to the provincial ministry of health for capital expenditures, including facilities, equipment, and renovations. The provinces provide most of the financing for capital acquisition, but hospitals must provide some funding themselves. While hospitals may acquire enough private money for capital investments, the provinces can refuse to provide the associated operating costs for capital purchased without provincial approval.

In former West Germany, hospitals must submit a certificate of need to the state government for capital spending, and state and local governments provide the funding. In France, the investment decisions of public hospitals are publicly controlled. While private facilities can make their own investment decisions, prices are set by the govern-

ment, which indirectly influences the amount of capital that can be acquired.

In Great Britain, the central government determines a national budget for capital costs. Decisions about capital acquisition are made at various geographic levels, depending on the type of expenditure. For example, decisions about facilities or equipment that would be used by patients from a wide area, such as CT scanners or a new hospital, are made at a regional or national level.

Some provinces in Canada, such as Quebec and Ontario, have tried to limit the number of medical school graduates. The Canadian federal government also limits the number of foreign medical school graduates who can practice there. France attempted to restrict the number of physicians by lengthening the duration of medical school. Britain explicitly controls the number of hospital-based physicians by requiring regional approval for new positions.

Restrictions on capital acquisition have led to lower rates of technological diffusion of medical equipment in other countries than in the United States. A comparison of the availability of six technologies in the United States, Canada, and former West Germany shows much greater capacity in the United States than in the other two countries. For example, the numbers of open-heart surgical units per million persons were 1.2 in Canada, 0.7 in former West Germany, and 3.3 in the United States. The United States had 3.7 magnetic resonance imagers per million persons compared with 0.5 in Canada and 0.9 in former West Germany.

These smaller supplies of capital equipment have led to the rationing of medical care in some countries. In Canada, there are waiting lists for some kinds of elective procedures and equipment, although rationing varies by province. In Newfoundland in 1989 there was a two-month wait for a CT scan, a two-and-one-half month wait for a mammogram, and a six- to ten-month wait for a hip replacement. Waits of several months for cardiac surgery occur in Ontario. However, Alberta does not appear to have such rationing.

In Great Britain, there is no wait for emergency care, but other cases may have to wait weeks or months to see a specialist. Patients waiting for admission to a hospital are classified as urgent or nonurgent, with most cases on the waiting lists being for elective surgery. The wait for patients with an urgent medical condition is supposed to be not more than one month and for nonurgent cases not more than one year, although reports indicate that these waiting times are often exceeded.

Utilization Review

Two of these countries have instituted utilization review mechanisms as a cost containment strategy. The systems have in common the focus on identifying care that deviates from the norm, rather than applying objectively determined practice standards. Only one imposes penalties on physicians through financial sanctions for unneeded medical care.

All Canadian provinces have committees that monitor physician practice patterns. They only identify physicians whose practice patterns deviate greatly from the average, however, and attempt to uncover fraud and incompetence. No objective standards of care are applied.

Former West Germany has a system for monitoring physician costs that focuses on outpatient utilization. The sickness fund physician associations compare the costs per patient within type of service among physicians with the same experience, staff and equipment, and patient mix, and then review physicians whose practice costs are much higher than average. The penalty for exceeding average costs by more than 40 percent within a type of service is a reduction in fees for that type of service.

Cost Sharing and Taxation

Cost sharing--that is, requiring patients to pay part of the costs of the medical care that they consume--has been associated with lower health care utilization and thus lower costs. Nevertheless, cost sharing is not

used extensively in most countries except France, where out-of-pocket payments by patients amount to about 20 percent of national health expenditures, and the United States, where they are about 21 percent of total spending.

Enrollees in other countries pay for their health care through taxes levied to finance the health care systems. This reliance on taxes rather than cost sharing may increase the utilization of medical services and contribute to increased costs because there is no direct penalty for using more, rather than fewer, services.

Most OECD countries other than France and the United States impose only nominal or no cost-sharing requirements, and prohibit balance billing. In Canada's public health system patients can be billed for room and board in long-term care facilities. Under federal law, provinces may impose user fees or balance billing for other services, but none do because federal funding is reduced dollar-for-dollar for such amounts.

In the former West Germany, out-of-pocket costs represent 7 percent of total health care expenditures. Patients pay primarily for over-the-counter drugs and to obtain better medical equipment than the sickness funds provide. In Great Britain, patient cost sharing represents about 3 percent of the cost of the NHS.

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